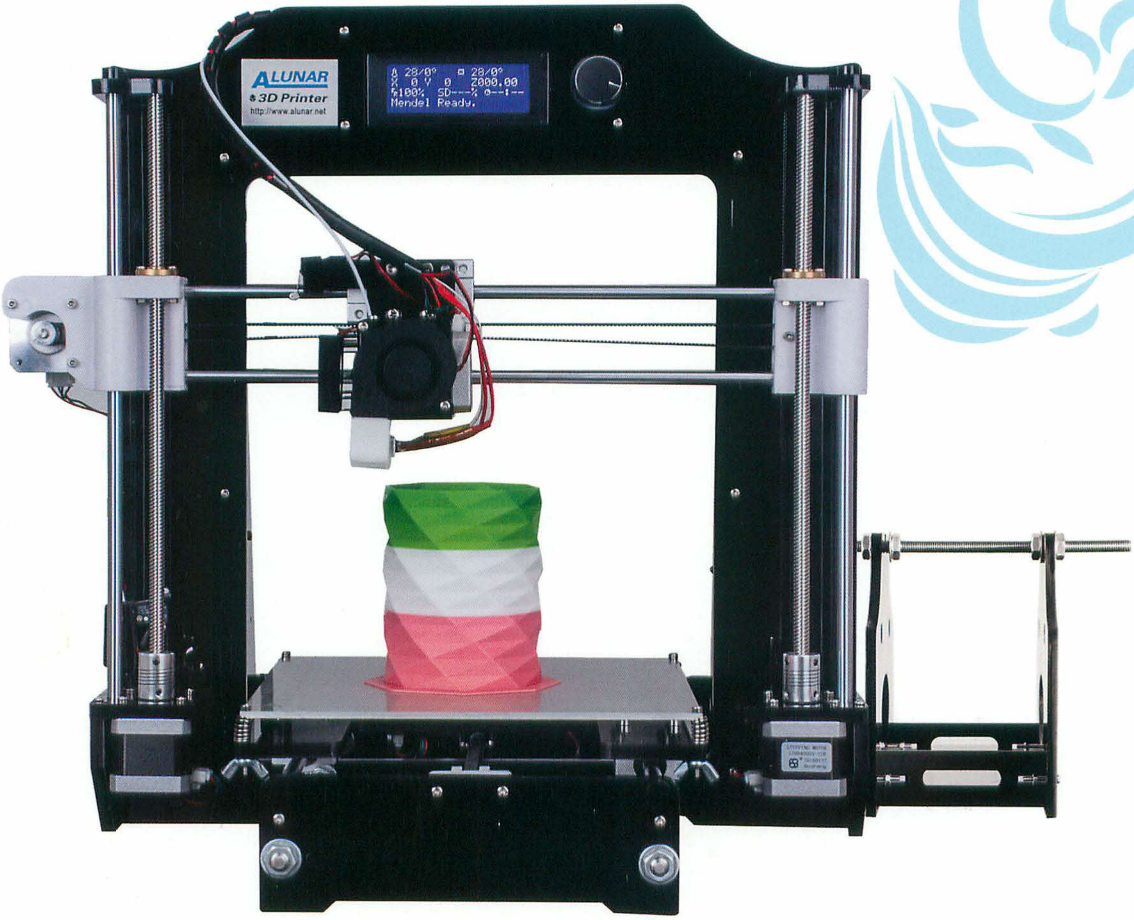
ALUNAR

3D Printer M508 Quick Start Guide



E-mail : service@alunar.net

Website : www.alunar.net

Catalogue

Foreword 3
1. Machine parameters 4
2. Flow Diagram for Quick Use Manual 4
3. Important Notice and Attentions 4
4. Preparatory Work 5
5. Preinstallation Checklist 5
    5.1 Step Way of Opening Box 5
    5.2 Take an account of kits 5
6. Assembly and Calibration for M508 5
    6.1 The main machine structure 5
    6.2 Step1 Frame assembly 6
    6.3 Step2 Y axis assembly and hotbed assembly 7
    6.4 Step3 Z axis assembly and X axis assembly 10
    6.5 Step4 Extruder assembly 13
    6.6 Step5 LCD assembly 16
    6.7 Step6 power and mainboard assembly 16
    6.8 Step7 Filament rack assembly 18
7. Testing and Commissioning 18
    7.1 Power on test 18
        7.1.1 Turn on the power switch, LCD display, as shown in Figure 18
        7.1.2 Fan check 18
        7.1.3 Nozzle and hot bed heating inspection 19
        7.1.4 Back to the origin inspection 19
    7.2 Hotbed leveling test: 19
        7.2.1 Rough Debugging to level hotbed 19
        7.2.2 Accurate Debugging 20
        7.2.3 Fine Debugging when printing 20
    7.3 Change the Filament 21
        7.3.1 Change the Filament when not printing 21
        7.3.2 Change the Filament When Printing 21
    7.4 Feature Demonstration 21
        7.4.1 Instruction of Operation part for Off-line Printing 22
        7.4.2 The first Memo Interface 22
        7.4.3 The secondary memo interface 22
        7.4.4 Prepare for printing (prepare) 23
        7.4.5 Move the axis and input& output the filament (Move Axis) 24
        7.4.6 The Parameter Adjustment when not printing (Control) 24
        7.4.7 Real-time parameter adjustment (Tune) 25
        7.4.8 Parameter adjustment when printing (Control) 26
        7.4.9 Print from SD 26
8. Printing Test 26
9. Senior Instruction 27
    9.1 Off-line Printing 27
        9.1.1 How to use Cura 15.04 27
        9.1.2 Online Printing 34
10. Frequently Asked Questions and Solutions 38
    10.1 “Err: MINTEMP” Alarm processing method 38
    10.2 Trouble: LCD screen is not bright 39
    10.3 Trouble: Rotation button cannot be up and down the selection menu 39
    10.4 No extruded filament when printing 40
    10.5 Problems on the distance between nozzle and hotbed 40
    10.6 Model Dislocation when printing 41

Foreword

Thanks in advance for choosing our M508 3D Printer! With the Quick Start Guide (here in after as "Guide"), you could enjoy accomplishing the assembly, Test and Printing step by step. Meanwhile, you will also learn the structure principle and its special FDM printing technology deeply, and then you will get great progress on not only the theoretical knowledge but also the manipulative ability.

To give play to the bigger effect of the printer and ensure the worry-free buying, smooth and enjoyable using, we spare no effect to consider the problem and difficulty you will meet with from when you order the printer and make detail videos and pictures to show the exact settle way. We write this "Guide" elaborately in great detail and we will always accompany with your using 3D printer. The kits would come to you with high-class part and need you put them together. So please read the"Guide"carefully before you assembly and use the printer and use the printer in strict accordance with the "Guide" to avoid any defective or invalid use caused by improper operation. So please keep the "Guide" for your easy reference.

Special Tips:

With our objective of constant update for our printer, we would not make future notice to you if some specifications and models updated. And we apologize for the inconvenience would lead to you.

We will do our best to help and solve the problem with our products.Your positive review and feedback are so appreciated!

Wish you a nice day!

Alunar 3D team

1. Machine parameters

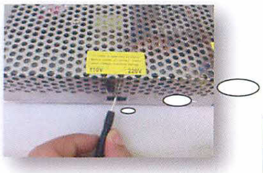
Printing technology	FDM	Nozzle diameter	0.3(default),0.4,0.5mm
Print size	200*200*180mm	Printing precision	0.1-0.3mm
Filament	PLA /ABS /HIPS/WOOD	Printing speed	40-100mm/s (proposal)
Filament diameter	₵ 1.75mm	Working condition	10-40℃
Number of extruder	1	Humidity	20-50％

2. Flow Diagram for Quick Use Manual

Matters and Attentions ➛ Preparatory Work ➛ Preinstallation Checklist ➛ Assembly and Calibration ➛ Printing Test ➛ Senior Instruction ➛ Frequently Asked Questions and Settle Way

3. Important Notice and Attentions

3.1 Keep the assembling operation platform level.
3.2 Please ensure that you move to the right tap position for input voltage (110V or 220V) of the power supply (as shown in the picture).

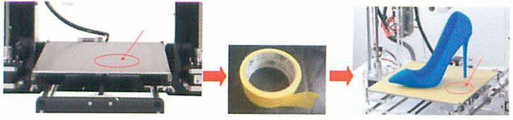


Warning: Must be in the condition of power equipment of the strike.

Input Voltage	100~160V	200~260V
Position choice	110V	220V

3.3 You need to make a proper degree of tightness of the pull belt for X axis & Y axis.
3.4 Ensure manual operation slide smoothly when you install the X, Y, Z axis.
3.5 When aquipped the hotbed, you should keep the 4 angles level for sure.
3.6 Ensure the correct wiring for controller board and plug tightly into the exact socket.
3.7 Don't plug and unplug the wiring for controller board when power on, especially don't plug and unplug the connect wiring for power supply.
3.8 Don't touch the extruder and hotbed when printer is power on to avoid the scald.
3.9 Before installation please remove the protective paper.

3.10 Before printing please paste on crepe paper.



4. Preparatory Work

1. Tool and kit preparing: one level desk at more than 2 sq. m. size, one computer, one scissor, SD card reader, power supply and so on.
2. **Open the box you got, and read the "Guide" from the SD card. We suggest that you should copy all the documents to the computer from the SD card and then start assembling according to the "Guide" (SD-Card: \Installation Instruction\ALUNAR 3D Printer M508 Quick Start Guide).**

5. Preinstallation Checklist

5.1 Step Way of Opening Box

Please look over the whole box appearance and make sure whether the box is damaged (if damaged, please feel free to contact with our customer service); and then please open the box and check the kits list as per "opening the carton" (SD-Card: \Packing list\Open the carton.)And "Video of opening carton" (SD-Card: \Installation Instruction\Video\ Open Carton.MP4)

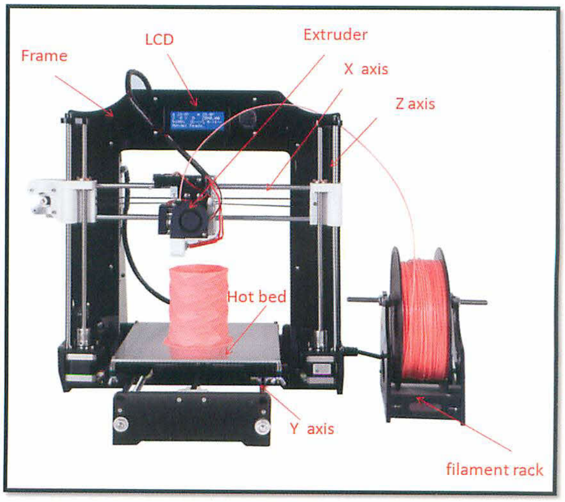
5.2 Take an account of kits

Please check out all the parts and make sure if any part is lost or damaged as per the "Packing List" (SD-Card: \Packing list) and video "Open carton" (SD-Card: \Installation Instruction\Video\Open Carton.mp4.) Please feel free to contact our customer service once you find out that you lost or got any defective parts (except leading by the inartificial reason). We will try our best to settle your problems as soon as possible) .

6. Assembly and Calibration for M508

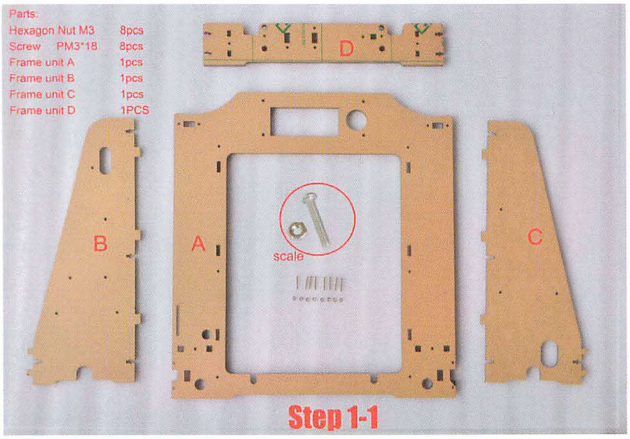
M508 assembly: Please assemble the printer by following the step1- step7 on assembly diagram and video, and pay attention to the prompt for key of assembling.(SD-Card: \Installation Instruction\Video)

6.1 The main machine structure



6.2 Step1 Frame assembly

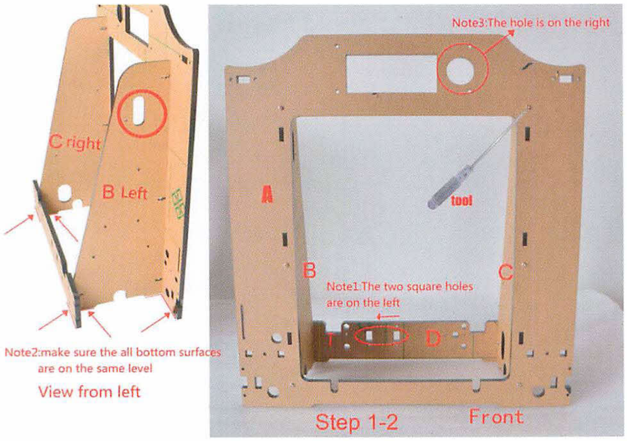
Video (SD-Card: \Installation Instruction\Video\1-Frame assembly.mp4)



Parts:

Hexagon Nut M3	8pcs
Screw PM3*18	8pcs
Frame unit A	1pcs
Frame unit B	1pcs
Frame unit C	1pcs
Frame unit D	1PCS

Step 1-1



Note3:The hole is on the right

Note1:The two square holes are on the left

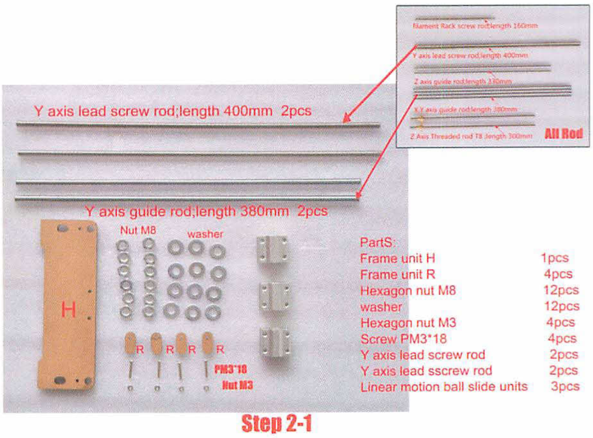
Note2:make sure the all bottom surfaces are on the same level

View from left

Step 1-2

6.3 Step2 Y axis assembly and hotbed assembly

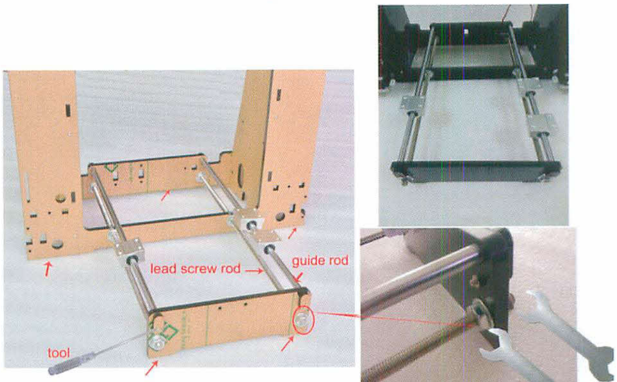
Video (SD-Card: \Installation Instruction\Video\2-Y-Axis and Hot bed Assembly.mp4)


filament Rack screw rod;length 160mm
Y axis lead screw rod;length 400mm
Z axis guide rod;length 330mm
X Y axis guide rod;length 380mm
Z Axis Threaded rod T8 length 300mm
All Rod
Y axis lead screw rod;length 400mm 2pcs
Y axis guide rod;length 380mm 2pcs
Nut M8
washer
H
R
R
R
R
PM3*18
Nut M3

PartS:

Frame unit H	1pcs
Frame unit R	4pcs
Hexagon nut M8	12pcs
washer	12pcs
Hexagon nut M3	4pcs
Screw PM3*18	4pcs
Y axis lead screw rod	2pcs
Y axis lead sscrew rod	2pcs
Linear motion ball slide units	3pcs

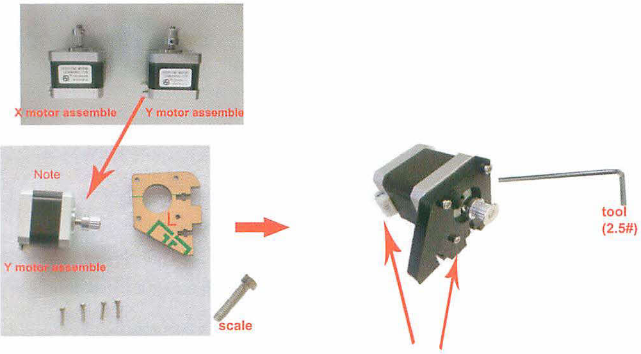
Step 2-1



Note1:make sure the all bottom surfaces are on the same level

Note2: Tighten the hexagon nut M8 after the frame is well adjusted .

Step 2-2



PARTS：

Hexagon screw M3*12	4PCS
Frame unit L	2PCS
Y motor assemble	1PCS

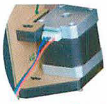
Note:The motor socket is aligned with the hypotenuse of Frame unit L

Step 2-3

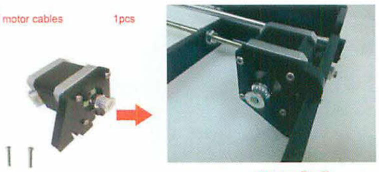
Motor cable

Parts:

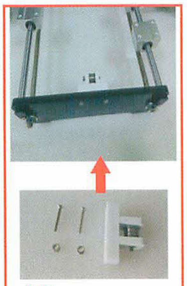
Y motor assemble	1 pcs
Screw PM3*18	2pcs
Hexagon nut M3	2pcs
Y motor cables	1pcs



Y motor cables lenght:600mm

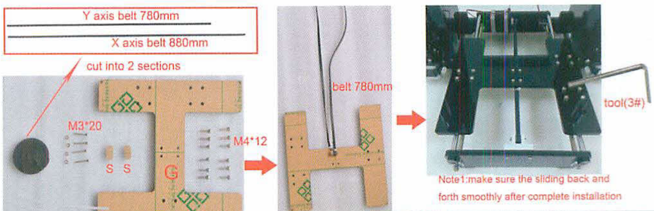


step 2-4



Parts:

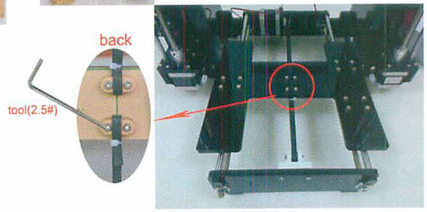
Y holder assemble	1pcs
Screw PM3*18	2pcs
Hexagon nut M3	2pcs



Note1:make sure the sliding back and forth smoothly after complete installation

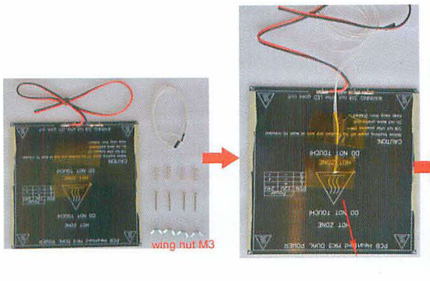
Parts:

Frame unit G	1pcs
Frame unit S	2pcs
Hexagon screw M4*12	12pcs
Hexagon screw M3*20	4pcs
Hexagon nut M3	4pcs
Belt	780mm
tie-wrap	2pcs



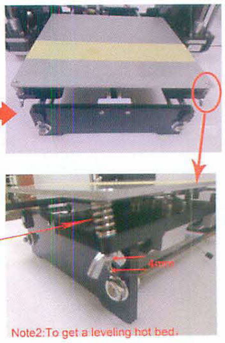
Note2:After fixing the timing belt for Y axis , to check and make sure the belt tension is moderate,not too loose .Also make sure the sliding back and forth smoothly after complete installation

Step 2-5



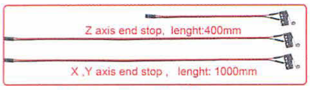
Parts:

Hot bed	1pcs
Thermistor	1pcs
Spring	4pcs
screw M3*30	4pcs
Wing nut M3	4pcs

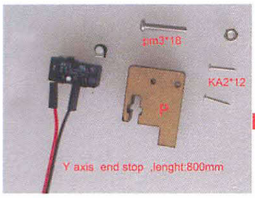


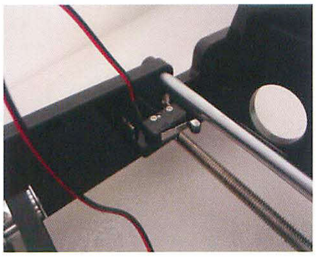
Note2:To get a leveling hot bed, make sure 4 screws are same about 5mm out coming from the nut

Step 2-6


Z axis end stop, lenght:400mm
X ,Y axis end stop , lenght: 1000mm

All mechanical limited switch





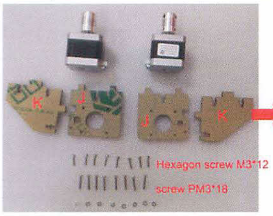
Parts:

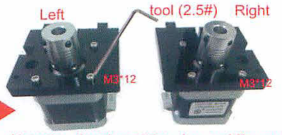
Y axis endstop	1pcs
Frame unit P	1pcs
Screw PM3*18	1pcs
Screw KA2*12	2pcs
Hexagon nut M3	1pcs

Step 2-7

6.4 Step3 Z axis assembly and X axis assembly

Video (SD-Card: \Installation Instruction\Video\ 3-Z-X-Axis Assembly.mp4)

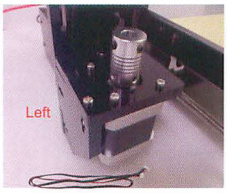




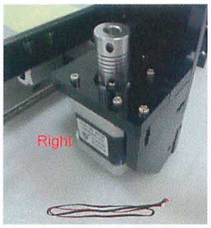
Note:the direction of the plug and Frame J

Parts:

Frame Unit J	2pcs
Frame Unit K	2pcs
Hexagon screw M3*12	8pcs
Screw PM3*18	8pcs
Hexagon nut M3	8pcs
Motor cables	2pcs



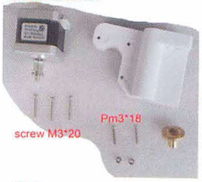
left cable lenght :600mm

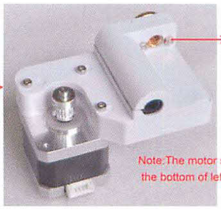


right cable lenght :1000mm

Step 3-1

X motor assemble

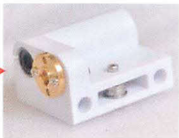




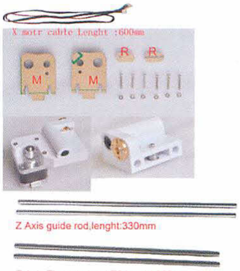
Note:The motor socket is aligned with the bottom of left plastic seat

Parts:

Left plastic seat	1pcs
Right plastic seat	1pcs
X motor assemble	1pcs
Hexagon screw M3*20	3pcs
Screw PM3*18	4pcs
Hexagon nut M3	4pcs
Threaded Screw nut	2pcs



Step 3-2

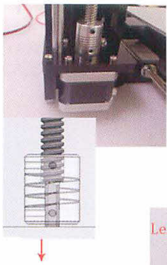


Z Axis guide rod,lenght:330mm

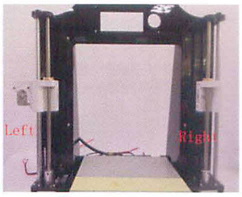
Z Axis Threaded rod T8 lenght:300mm

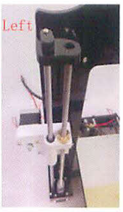
Parts:

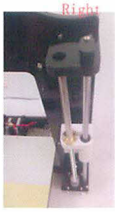
Left plasitc seat assemble	1pcs
Right plastic seat assemble	1pcs
Frame unit M	2pcs
Frame unit R	2pcs
Screw PM3*18	6pcs
Hexagon nut M3	6pcs
X motor cable	1pcs



Note:The bottom of the Threaded rod must be close to the top of the motor shaft



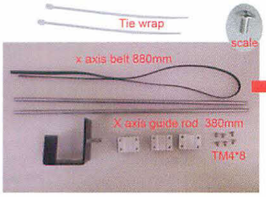




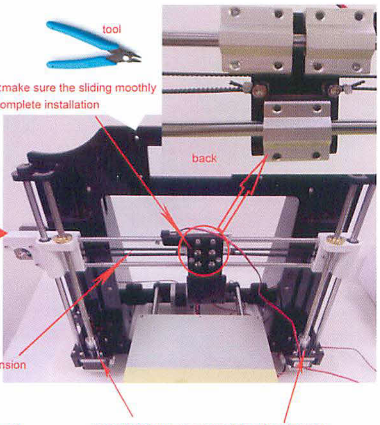
Step 3-3

Parts:

X axis Belt 880mm	1pcs
U bracket assemble	1pcs
X axis guide rod	2pcs
Screw TM4*8	6pcs
Linear motion ball slide units	3pcs
Tie-wrap	2pcs



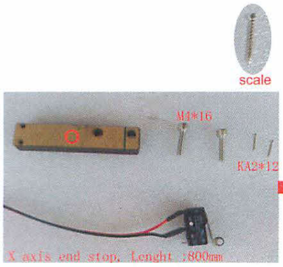
Note2:make sure the sliding moothly after complete installation

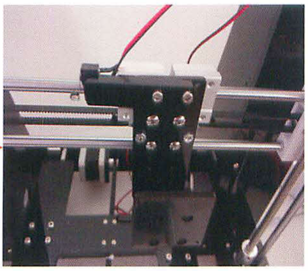


Note3:make sure the belt tension is moderate,not too loose

Step3-4

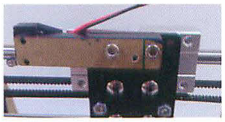
Note1:twist the couplers of the threaded rod , make sure it move up and down smoothly



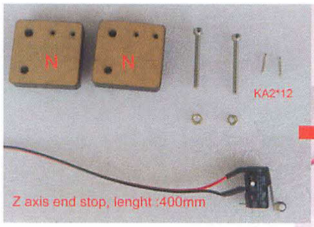


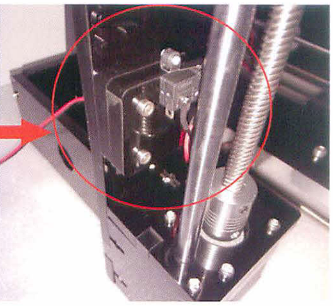
Parts:

Frame unit o	1pcs
Hexagon screw M4*16	2pcs
screw KA2*12	2pcs
X axis end stop	1pcs



Step 3-5





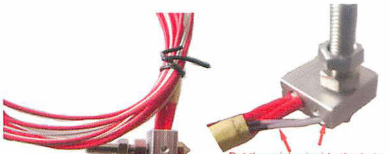
Parts:

Frame unit N	2pcs
Hexagon screw M3*30	2pcs
Screw KA2*12	2pcs
Hexagon nut M3	2pcs
Z axis end stop	1pcs

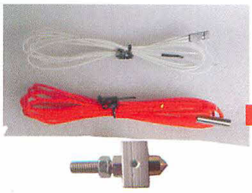
Step 3-6

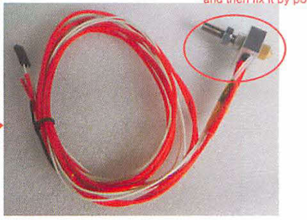
6.5 Step4 Extruder assembly

Video (SD-Card: \Installation Instruction\Video\ 4-Extruder Assembly.mp4)



Put thermistor inside the hole and then fix it by polyimide tap



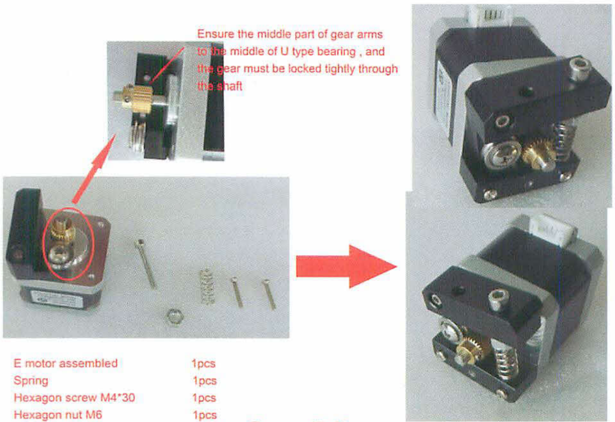


Parts:

NTC Thermistor	1pcs
Heater Cartridge	1pcs
Nozzle assemble	1pcs

Step 4-1

Note:These combination are well completed in upgraded version

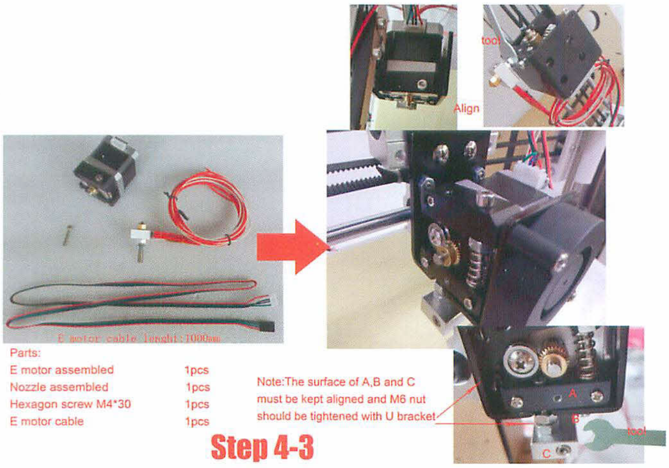


Ensure the middle part of gear arms to the middle of U type bearing , and the gear must be locked tightly through the shaft

E motor assembled	1pcs
Spring	1pcs
Hexagon screw M4*30	1pcs
Hexagon nut M6	1pcs
Screw PM3*18	2pcs

Step 4-2

Note:These combination are well completed in upgraded version.

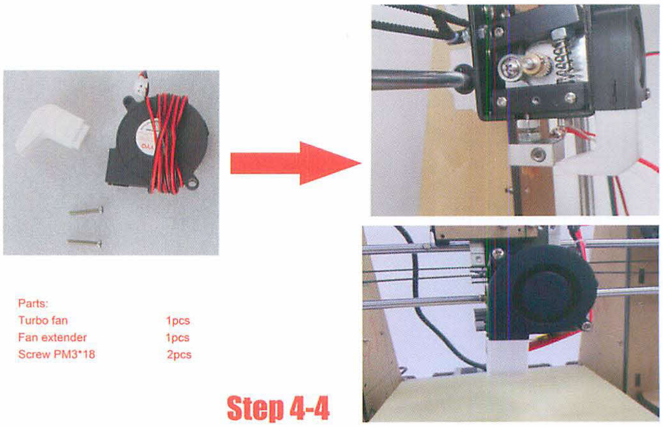


Parts:

E motor assembled	1pcs
Nozzle assembled	1pcs
Hexagon screw M4*30	1pcs
E motor cable	1pcs

Note:The surface of A,B and C must be kept aligned and M6 nut should be tightened with U bracket

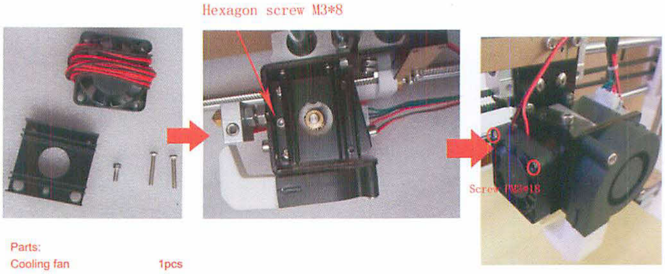
Step 4-3



Parts:

Turbo fan	1pcs
Fan extender	1pcs
Screw PM3*18	2pcs

Step 4-4



Parts:

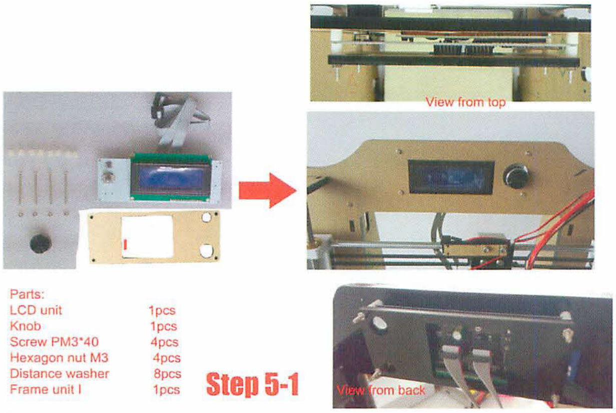
Cooling fan	1pcs
Heat sink	1pcs
Screw PM3*18	2pcs
Hexagon screw M3*8	1pcs

Note: or assemble this structure after inserting filament

Step 4-5

6.6 Step5 LCD assembly

Video (SD-Card: \Installation Instruction\Video\ 5-LCD-Assembly.mp4)



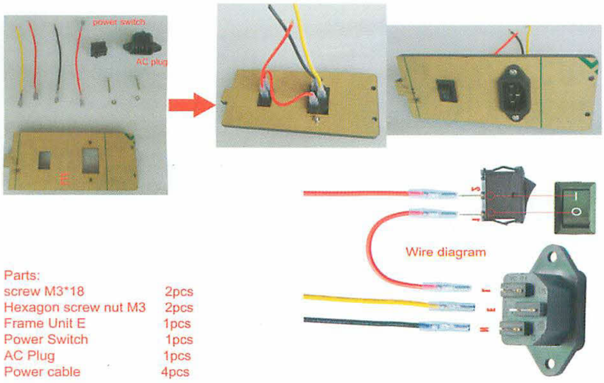
Parts:

LCD unit	1pcs
Knob	1pcs
Screw PM3*40	4pcs
Hexagon nut M3	4pcs
Distance washer	8pcs
Frame unit I	1pcs

Step 5-1

6.7 Step6 power and mainboard assembly

Video (SD-Card: \Installation Instruction\Video\ 6-Power and Mainboard Assembly.mp4)



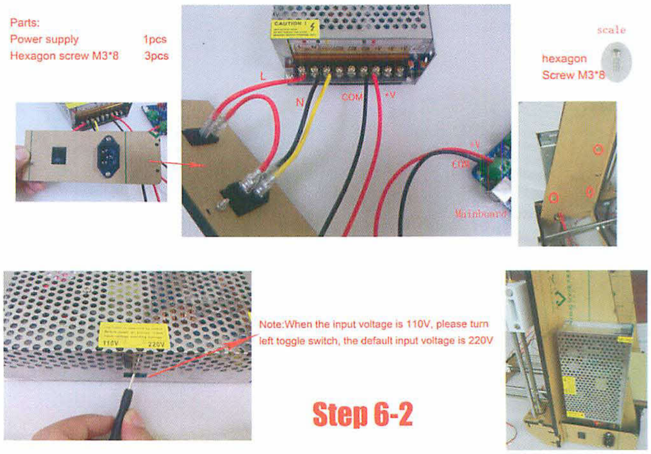
Parts:

screw M3*18	2pcs
Hexagon screw nut M3	2pcs
Frame Unit E	1pcs
Power Switch	1pcs
AC Plug	1pcs
Power cable	4pcs

Step 6-1

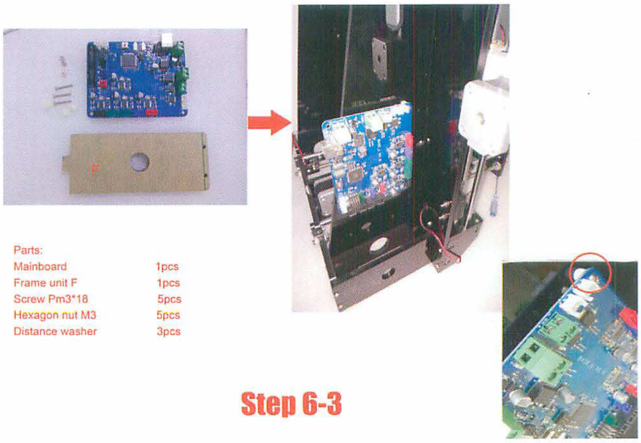
Parts:

Power supply	1pcs
Hexagon screw M3*8	3pcs



Note:When the input voltage is 110V, please turn left toggle switch, the default input voltage is 220V

Step 6-2



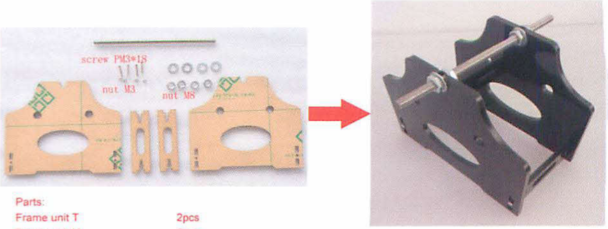
Parts:

Mainboard	1pcs
Frame unit F	1pcs
Screw Pm3*18	5pcs
Hexagon nut M3	5pcs
Distance washer	3pcs

Step 6-3

6.8 Step7 Filament rack assembly

Video (SD-Card: \Installation Instruction\Video\ 7-Filament Rack Assembly.mp4)



Parts:	
Frame unit T	2pcs
Frame unit U	2pcs
Hexagon nut M8	4pcs
Washer	4pcs
Screw PM3*18	4pcs
Hexagon nut M3	4pcs
Filament Rack screw rod	1pcs

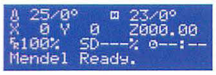
Step 7-1

7. Testing and Commissioning

7.1 Power on test

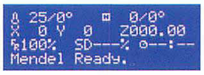
When connecting the power supply to your printer, please make sure whether the power indicator light is on, LCD screen show correctly or not, hotbed and the extruder can be heated right or not, the thermistor, turbine fan and radiator fan works normally or not; (SD-Card:\ Installation Instruction\ Video\ Power On Inspection.mp4)

7.1.1 Turn on the power switch, LCD display, as shown in Figure



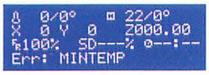
```
  25/0°    ▣ 23/0°
X  0 Y  0   Z000.00
 100%  SD---% ⊙--:--
Mendel Ready.
```

OK



```
  25/0°    ▣  0/0°
X  0 Y  0   Z000.00
 100%  SD---% ⊙--:--
Mendel Ready.
```

NG

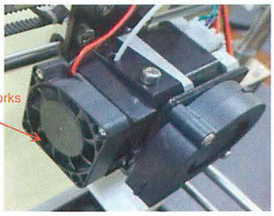


```
   0/0°    ▣ 22/0°
X  0 Y  0   Z000.00
 100%  SD---% ⊙--:--
Err: MINTEMP
```

NG

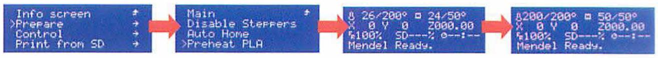
7.1.2 Fan check

Switch on the power, this fan works



7.1.3 Nozzle and hot bed heating inspection

"Prepare" →"Preheat PLA"



```
 Info screen      ↑
>Prepare          →
 Control          →
 Print from SD    →
```

```
 Main              ↑
 Disable Steppers
 Auto Home
>Preheat PLA
```

```
 26/200° ▣ 24/50°
X  0 Y  0   Z000.00
 100%  SD---% ⊙--:--
Mendel Ready.
```

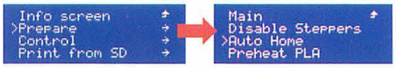
```
200/200° ▣ 50/50°
X  0 Y  0   Z000.00
 100%  SD---% ⊙--:--
Mendel Ready.
```

OK

7.1.4 Back to the origin inspection

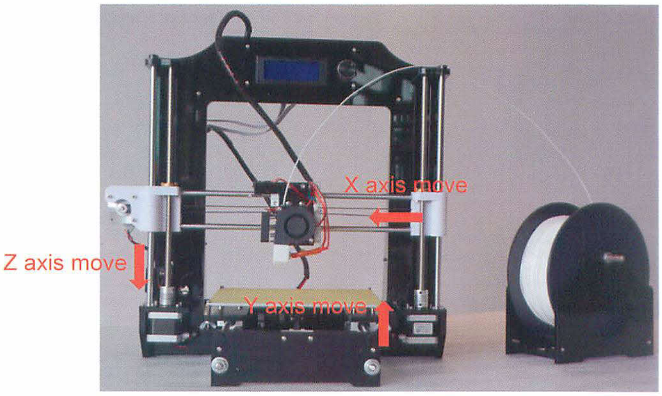
"Prepare" →"Auto Home"

X axis will move towards left, Y axis will move towards back, Z axis will move down, each axis will stop moving till their limit switch



```
 Info screen      ↑
>Prepare          →
 Control          →
 Print from SD    →
```

```
 Main              ↑
 Disable Steppers
>Auto Home
 Preheat PLA
```



7.2 Hotbed leveling test:

Hotbed leveling test: Please make calibration to level the hotbed according to the video(SD-Card:\Installation Instruction\Video\Hot Bed Leveling.mp4)After assembling, you need to level the bed when firstly print

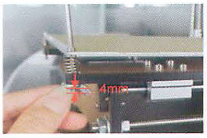
7.2.1 Rough Debugging to level hotbed

7.2.1.1 Adjust the screws at the 4 angles of the hotbed to make the screws 4mm out of the nut (Picture 7.1);

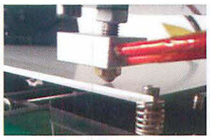
7.2.1.2 Move the nozzle as near as possible to the hotbed, and pull the extruder with hand to the upper everywhere of hotbed to check if the distance between the nozzle and 4 angles of hotbed is accordant (Picture7.2);

7.2.1.3 Hold the T coupling at left & right bottom of Z axis with hand and rotate it to make the nozzle to 4mm above the hotbed (Picture7. 3, 7.4)

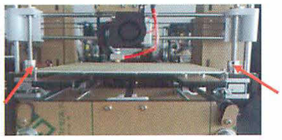
7.2.1.4 Move the Z axis limit switch to the proper position, to make that the Z axis stop once the bottom of left Z axis nut support meet the sphere of limit switch (Picture 7.5)



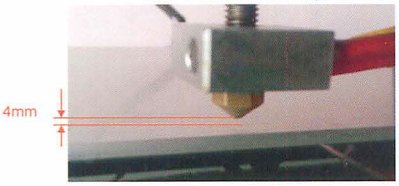
Picture 7.1



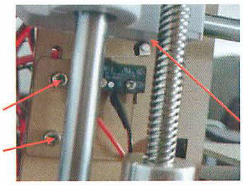
Picture 7.2



Picture 7.3



Picture 7.4



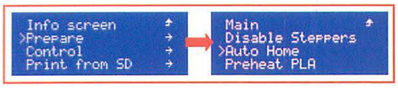
Picture 7.5

7.2.2 Accurate Debugging

7.2.2.1 Auto home and make the XYZ axis back to origin (Picture 7.6);

7.2.2.2 Screw the screws at 4 angles of hotbed to make the nozzle above 1mm to the hotbed (Picture 7.7)

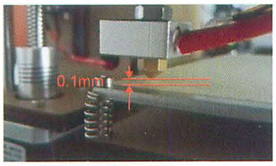
(PS: After Auto home, please click "Disable Steppers" or turn off the power, otherwise, you will can't move the XYZ axis by hand)



```
 Info screen      ↑
>Prepare          →
 Control          →
 Print from SD    →
```

```
 Main              ↑
 Disable Steppers
>Auto Home
 Preheat PLA
```

Picture 7.6

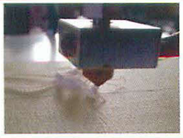


Picture 7.7

7.2.3 Fine Debugging when printing

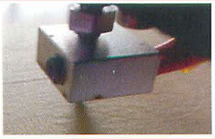
Please check the printing status of first layer when you first printing by your printer. If you need, you can screw the screws at 4 angles of hotbed to the best position (as shown on picture 7.10)

The different printing effect depends on the different distance between nozzle and hotbed:



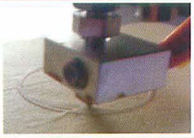
Picture 7.8

The distance between nozzle and hotbed is too high



Picture 7.9

The nozzle is too close to hotbed



Picture 7.10

The distance between nozzle and hotbed is proper

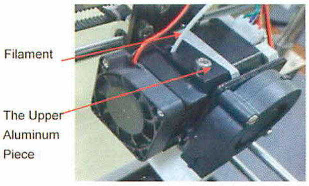
7.3 Change the Filament

Watch the video "Manually Change Filament "and get the operation way of this special feature of this printer (SD-Card: \Installation Instruction\Video\ Manually Change Filament.MP4)

7.3.1 Change the Filament when not printing

Pull out the filament: Firstly preheat the nozzle to the exact temperature(PLA：200～220℃，ABS：240～260℃) Once the temperature is up to the same as setting, press the upper aluminum piece on the extruder motor with left hand, meanwhile push down to extrude part of filament and then pull out it rapidly with right hand.(PS:Don't pause in the process to avoid the jam lead by the cooling midway. Picture 7.11, 7.12) (SD-Card: \Installation Instruction\Video\ Change Filament When Printing.MP4)

Insert the Filament: Press the upper aluminum piece on the extruder motor and meanwhile insert the filament into the throat (You can cut the filament into oblique angle with scissor to plug in smoothly. Picture 7.13), push down to extrude part of filament (Picture7.12), then let the aluminum piece go, finally clear up the filament extruded.



Picture 7.11

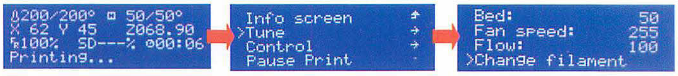
Picture 7.12

Picture 7.13

7.3.2 Change the Filament When Printing

7.3.2.1 Click "tune" →"change filament"; The printer stop working and the XY axis would be back to the origin, then the extruder would send back the filament from the printer automatically (Picture 7.14);

7.3.2.2 Change the filament manually and press the knob, then the printer would go on printing starting from the former position of printing model.

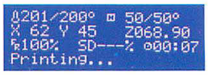


```
200/200° ▣ 50/50°
X 62 Y 45   Z068.90
 100%  SD---% ⊙00:06
Printing...
```

```
 Info screen      ↑
>Tune             →
 Control          →
 Pause Print
```

```
 Bed:             50
 Fan speed:      255
 Flow:           100
>Change filament
```

Picture 7.14



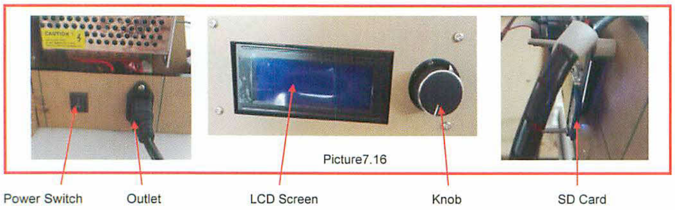
```
201/200° ▣ 50/50°
X 62 Y 45   Z068.90
 100%  SD---% ⊙00:07
Printing...
```

Picture 7.15

7.4 Feature Demonstration

Feature Demonstration: watch the video "LCD Feature and Printing from SD Card" and get the operation way of all basic features; (SD-Card: \Installation Instruction\Video\LCD Feature and Printing From SD Card.MP4)

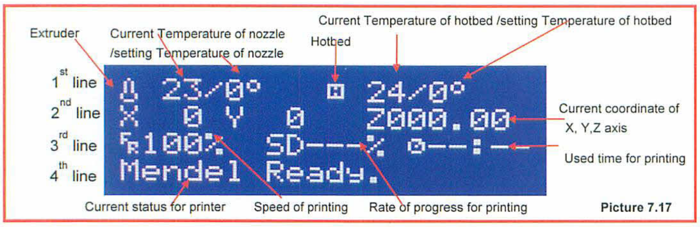
7.4.1 Instruction of Operation part for Off-line Printing



Picture7.16

Off-line printing operation for 3D printer constitutes 5 parts as below (as shown above Picture 7.16): Power Switch, Outlet, LCD Screen, Spin Button, and SD Card And you can control the knob easily and quickly by rotating and pressing.

7.4.2 The first Memo Interface


Extruder
Current Temperature of nozzle /setting Temperature of nozzle
Hotbed
Current Temperature of hotbed /setting Temperature of hotbed
1st line
2nd line
3rd line
4th line
23/0°
24/0°
X 0 Y 0 Z000.00
100% SD---% 0--:--
Mendel Ready.
Current coordinate of X, Y,Z axis
Used time for printing
Current status for printer
Speed of printing
Rate of progress for printing

Picture 7.17

Plug the outlet and switch on, then access to the first memo interface (as shown on picture 7.17) which consist of the 4 parts as below: temperature, XYZ coordinate system, Printing status, Current situation of system

1. 1st line

It will show the temperature of nuzzle and hotbed, the two parts separated by "/" will show respectively before and after the current and setting temperature, Such as 26/200° 24/50°, it shows that setting temperature for nuzzle is 180° and the current is 72°, it shows that setting temperature for hotbed is 70° and the current is 31°

2. 2nd line

It will show the exact position of XYZ axis move onto in the printing.

3. 3rd line

It will show the speed and rate of progress of printing, and used time for printing. And it shows the multiple speed of printing which is set up in the slicing."100%" means the exact speed and 200% means that printing by the speed 2 times as the one setting in slicing

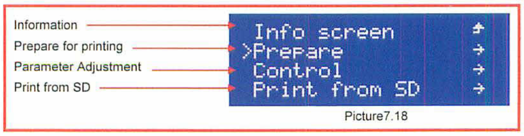
4. 4th line

It shows the current status of printer, such as Mendel Ready. Bed Heating. Printing...

7.4.3 The secondary memo interface

Press the knob and access to the 2nd memo interface, and it will show differently as below when the printer is working or not.

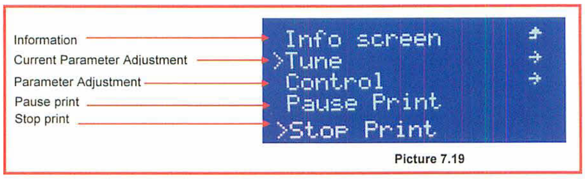
7.4.3.1 The 2nd memo interface when not printing (as shown on picture 7.18)



Picture7.18

Click the (Info screen) and back the 1st page of memo interface.
Click the (Prepare) and access to set up for printing prepare such as preheat the nozzle & hotbed, auto home, move the nozzle and hotbed.
Click the (Control) and set up for the temperature of nozzle & hotbed, parameter of stepper motor, restoring the fail-safe, and storage memory etc.
Click the (Print from SD) and choose the printing file from the SD card, and it is sort of by copy time.

7.4.3.2 The 2nd memo interface when printing (as shown on picture 7.19)

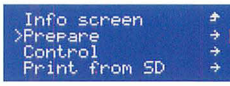


Picture 7.19

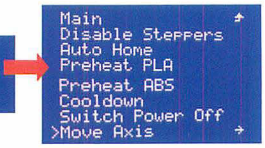
Click the (Info screen) and back the 1st page of memo interface.
Click the (Tune) and adjust the temperature of nozzle & hotbed, speed of fan when printing.
Click the (Control) and set up for the temperature of nozzle & hotbed, parameter of stepper motor, restoring the fail-safe, and storage memory etc.
Click the (Pause Print) and pause the printing.
Rotate down the knob and click the (Stop Print) to stop printing.

7.4.4 Prepare for printing (prepare)

7.4.4.1 When 3D printer not printing, rotate the knob and click "prepare" in the secondary memo interface (Picture 7.20) and then access to the 3rd memo interface (Picture 7.21).



Picture 7.20



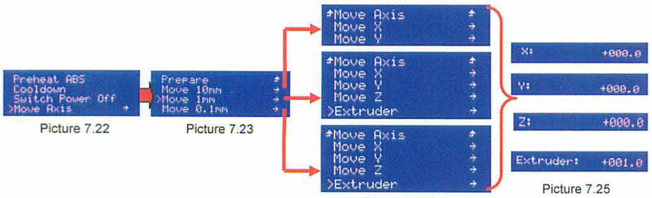
Picture 7.21

(1) Unlock the disable stepper motor: click the (Disable Steppers) and then you can manual move the XYZ axis smoothly.
(2) Click the (Auto Home) and the XYZ axis will move back to the origin.
(3) Click the (Preheat PLA) and then the nozzle would be heating up to the same as the setting temperature for PLA, meanwhile, the LCD will also go back to the first memo interface.
(4) Click the (Preheat ABS) and then the nozzle would be heating up to the same as the setting temperature for ABS, meanwhile, the LCD will also go back to the first memo interface.
(5) Click the (Cool down), the temperature for nozzle and hotbed would be cool down to 0° automatically.

(6) Click the (switch power off) to turn off the power (it is not put into use at present).
(7) Click the (Move Axis) to control the move of XYZ, input & output the filament. Please don't take the 10mm as unit for Z axis movement and input & output the filament (extruder).

7.4.5 Move the axis and input & output the filament (Move Axis)

Click the "Move Axis" and do as the guide to all parts, then you will access to the 4th(Picture 7.23), 5th(Picture 7.24), and 6th(Picture 7.25) memo interface step by step. And then you could only take the 1mm & 0.1mm as unit for the Z axis movement and input & output filament (extruder).



Picture 7.22

Picture 7.23

Picture 7.25

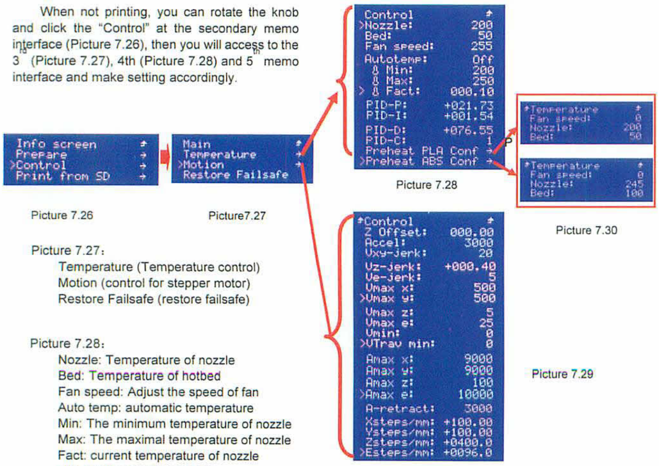
Picture 7.24

PS: The axis movement is based on current coordinate and it can only move to the positive direction.

The extruder could move to the positive & negative direction to input & output the filament.

7.4.6 The Parameter Adjustment when not printing (Control)

When not printing, you can rotate the knob and click the "Control" at the secondary memo interface (Picture 7.26), then you will access to the 3rd (Picture 7.27), 4th (Picture 7.28) and 5th memo interface and make setting accordingly.



Picture 7.28

Picture 7.30

Picture 7.26

Picture7.27

Picture 7.29

Picture 7.27:
Temperature (Temperature control)
Motion (control for stepper motor)
Restore Failsafe (restore failsafe)

Picture 7.28:
Nozzle: Temperature of nozzle
Bed: Temperature of hotbed
Fan speed: Adjust the speed of fan
Auto temp: automatic temperature
Min: The minimum temperature of nozzle
Max: The maximal temperature of nozzle
Fact: current temperature of nozzle
PID-P: The kp value of PID
PID-I: The ki value of PID
PID-D: The kd value of PID
PID-C: The ration of PID
Preheat PLA Conf(setting for preheat PLA)
Preheat ABS Conf(setting for preheat ABS)

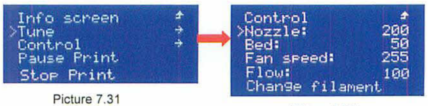
The PID defines the temperature adjustment. As usual, you needn't to manual adjust these three variables since there are instructions of automatic optimizing for PID.

Picture 7.29
Z offset: Z axis offset
Accel: accel
Vxy-jerk: The speed variation of XY axis with no need acceleration
Vz-jerk: The speed variation of Z axis with no need acceleration
Ve-jerk: The speed variation of Extruder with no need acceleration
Vmax X: The maximal speed of X axis
Vmax Y: The maximal speed of Y axis
Vmax Z: The maximal speed of Z axis
Vmax E: The maximal speed of Extruder
Vmin:
VTrav min: The Maximal speed of quicken enablement
Amax X: The maximal acceleration speed of X axis
Amax Y: The maximal acceleration speed of Y axis
Amax Z: The maximal acceleration speed of Z axis
Amax E: The maximal acceleration speed of Extruder
A-retract: The acceleration at * mm/s
Xsteps/mm: The distance of each step for X axis motor
Ysteps/mm: The distance of each step for Y axis motor
Zsteps/mm: The distance of each step for Z axis motor
Esteps/mm: The distance of each step for Extruder motor

Picture 7.30
FAN Speed：Adjust the speed of fan.
Nozzle ：When not printing, you can set up the temperature of nozzle according to filament you used.
As usual, the temperature for PLA is up to 180-200° and for ABS is 230-250°.
Bed：When not printing, you can set up the temperature of hotbed according to filament you used.
As usual, the temperature for PLA is up to 50-70° and for ABS is 90°

7.4.7 Real-time parameter adjustment (Tune)

7.4.7.1 Only when the 3D printer working, the secondary memo interface would be show as picture 7.31 And click the "Tune" to access to the 3rd memo interface (Picture 7.32), and then you can adjust the parameter by rotating knob.



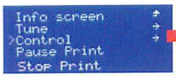
Picture 7.31

Picture 7.32

Speed (speed of printing): Adjust the speed of printing by rotating the knob.You can also the speed of printing by rotating the knob directly at the first memo interface.
Nozzle (the setting temperature of nozzle): You can adjust the temperature of nozzle when printing, then the nozzle would be heating up to the temperature as you set.
Bed (the setting temperature of hotbed): When printing, you can adjust the temperature of hotbed if you find the setting temperature by slicing is too high or too low. Then the hotbed would be heating up to the temperature as you set.
Fan speed (speed of fan): As usual, it is not necessary to adjust the speed of fan, but you can also set up it by your choice.
Flow (measure of extrusion): The unit for flow is percentage and you can set up it to the proper quantity if you find out it is not enough or too much when printing.
Change filament: Click it and the nozzle would be back to origin, then the filament feed roll would roll back to output the filament automatically.

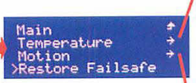
7.4.8 Parameter adjustment when printing (Control)

When 3D printer printing, the secondary memo interface would be shown as（Picture 18), click the "Control" to access to the 3rd (Picture 7.27) 4th (Picture 7.28,7.29), ,5th (Picture 7.30)memo interface.



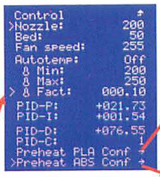
```
 Info screen      ↑
 Tune             →
>Control          →
 Pause Print
 Stop Print
```

Picture 7.33



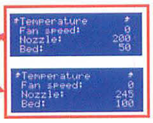
```
 Main               ↑
 Temperature        →
 Motion             →
>Restore Failsafe
```

Picture 7.34



```
 Control             ↑
>Nozzle:           200
 Bed:               50
 Fan speed:        255
 Autotemp:         Off
  🌡 Min:           200
  🌡 Max:           250
> 🌡 Fact:       000.10
 PID-P:        +021.73
 PID-I:        +001.54
 PID-D:        +076.55
 PID-C:              1
 Preheat PLA Conf    →
>Preheat ABS Conf    →
```

Picture 7.35



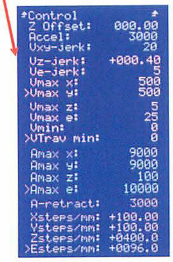
```
↑Temperature        ↑
 Fan speed:         0
 Nozzle:          200
 Bed:              50
```

```
↑Temperature        ↑
 Fan speed:         0
 Nozzle:          245
 Bed:             100
```

Pict2ure 7.37

You needn't to adjust it since all the setting on Picture 7.35、7.36 & 7.37 is almost the same as the one on Picture 7.28、7.29 & 7.30.

Ve-jerk: The speed variation of Extruder with no need acceleration

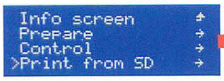


```
↑Control             ↑
 Z Offset:      000.00
 Accel:           3000
 Vxy-jerk:          20
 Vz-jerk:      +000.40
 Ve-jerk:            5
 Vmax x:           500
>Vmax y:           500
 Vmax z:             5
 Vmax e:            25
 Vmin:               0
>VTrav min:          0
 Amax x:          9000
 Amax y:          9000
 Amax z:           100
>Amax e:         10000
 A-retract:       3000
 Xsteps/mm:    +100.00
 Ysteps/mm:    +100.00
 Zsteps/mm:    +0400.0
>Esteps/mm:    +0096.0
```

Picture 7.36

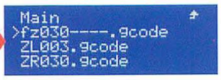
7.4.9 Print from SD

When 3D printer is not printing, click "print from SD" and access to 3rd page of memo interface (Picture 7.39) then start printing by choosing the ".g code" file.



```
 Info screen      ↑
 Prepare          →
 Control          →
>Print from SD    →
```

Picture 7.38



```
 Main               ↑
>fz030----.gcode
 ZL003.gcode
 ZR030.gcode
```

Picture 7.39

8. Printing Test

After all the above-mentioned test and you make sure the printer works well. Now you can get start a printing test. Please insert the SD Card into the card slot on the left back of the screen and then choose the "test-*.g code" file and start printing with rotating the spin button. (SD-Card: \Installation Instruction\Video\Test Print.mp4)

Congratulations! You've already accomplished the whole assembly for the M508. Please feel free to contact our customer service if you have any problem on technology or other. We will spare no effect to settle your problems accordingly. As you complete the printing test, you would be pride of yourself by creating the first 3D printer work. And welcome to share your amazing and successful DIY experience to our page online (www.alunar.net).

9. Senior Instruction

9.1 Off-line Printing

Off-line Printing: copy the "X.gcode"file to the SD card and insert the card into your printer, then start your printing directly. And you need to change it to "X.gcode"if the file you want to print is "X.STL".

How to use slicing software: Please open the "SD-Card: \ Software\Slicing software" and click the software"Cura 15.04" to slice the printing file as per the use manual shown on "How to use Cura 15.04".

9.1.1 How to use Cura 15.04

Note:

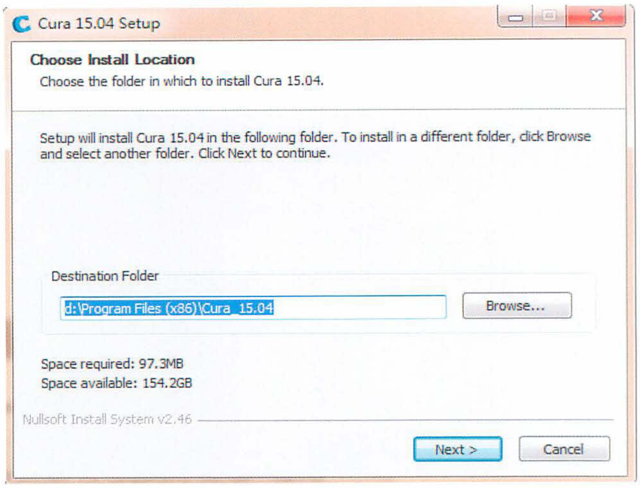
(1).We advise new user to use Cura for Slicing.

(2).The data you will slice depend on the item you need to print.

(3).Before you start printing, please make sure the parts of printer work well and the distance between nozzle and hotbed is about 0.1mm (A4 Paper thickness).

Ps: Most data was default, you need to change them depends on the object you want to print.

Step1:



Cura 15.04 Setup

Choose Install Location

Choose the folder in which to install Cura 15.04.

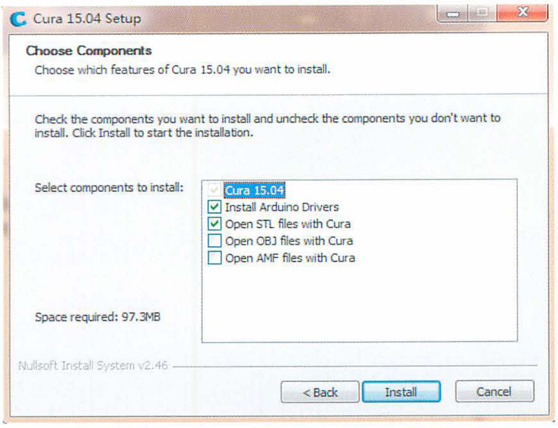
Setup will install Cura 15.04 in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.

Destination Folder

d:\Program Files (x86)\Cura_15.04

Space required: 97.3MB
Space available: 154.2GB

Step2:



Cura 15.04 Setup

Choose Components

Choose which features of Cura 15.04 you want to install.

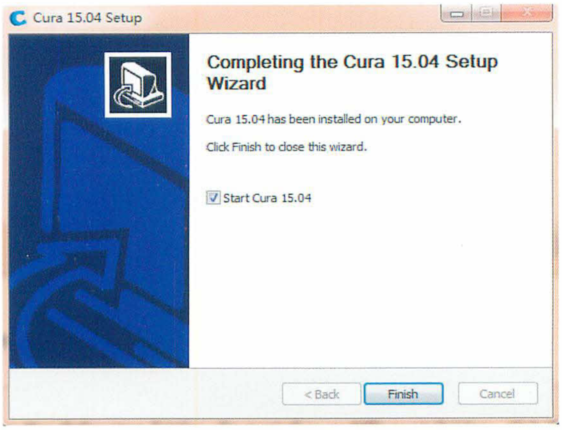
Check the components you want to install and uncheck the components you don't want to install. Click Install to start the installation.

Select components to install:

☑ Cura 15.04
☑ Install Arduino Drivers
☑ Open STL files with Cura
☐ Open OBJ files with Cura
☐ Open AMF files with Cura

Space required: 97.3MB

Step3:



Cura 15.04 Setup

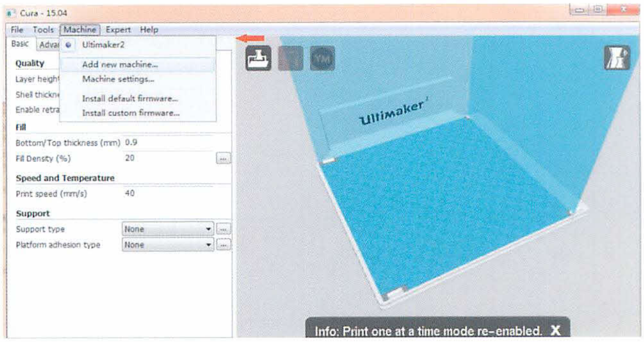
Completing the Cura 15.04 Setup Wizard

Cura 15.04 has been installed on your computer.

Click Finish to close this wizard.

☑ Start Cura 15.04

Step4:



Cura - 15.04

Quality
Layer height
Shell thickne
Enable retra

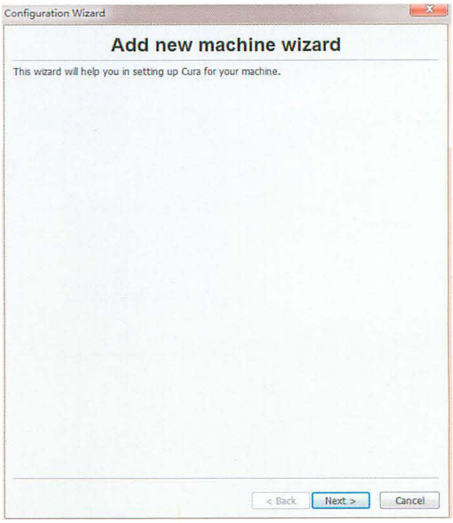
Fill
Bottom/Top thickness (mm) 0.9
Fill Density (%) 20

Speed and Temperature
Print speed (mm/s) 40

Support
Support type None
Platform adhesion type None

Info: Print one at a time mode re-enabled.

Step5:

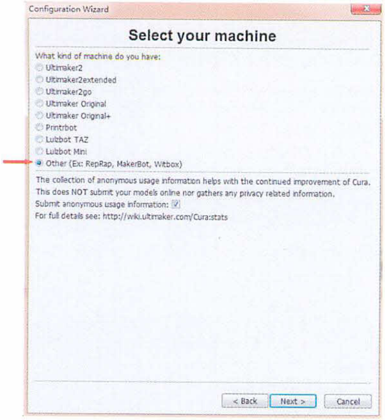


Configuration Wizard

Add new machine wizard

This wizard will help you in setting up Cura for your machine.

Step6:



Configuration Wizard

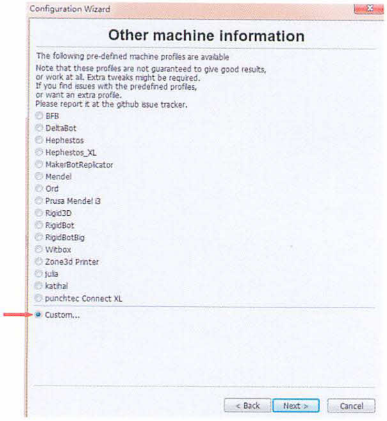
Select your machine

What kind of machine do you have:

- ○ Ultimaker2
- ○ Ultimaker2extended
- ○ Ultimaker2go
- ○ Ultimaker Original
- ○ Ultimaker Original+
- ○ Printrbot
- ○ Lulzbot TAZ
- ○ Lulzbot Mini
- ● Other (Ex: RepRap, MakerBot, Witbox)

The collection of anonymous usage information helps with the continued improvement of Cura.
This does NOT submit your models online nor gathers any privacy related information.
Submit anonymous usage information: ☑
For full details see: http://wiki.ultimaker.com/Cura:stats

Step7:



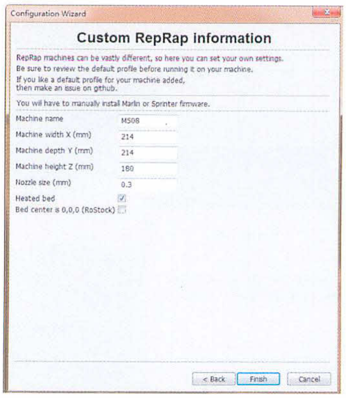
Configuration Wizard

Other machine information

The following pre-defined machine profiles are available
Note that these profiles are not guaranteed to give good results,
or work at all. Extra tweaks might be required.
If you find issues with the predefined profiles,
or want an extra profile.
Please report it at the github issue tracker.

- ○ BFB
- ○ DeltaBot
- ○ Hephestos
- ○ Hephestos_XL
- ○ MakerBotReplicator
- ○ Mendel
- ○ Ord
- ○ Prusa Mendel i3
- ○ Rigid3D
- ○ RigidBot
- ○ RigidBotBig
- ○ Witbox
- ○ Zone3d Printer
- ○ julia
- ○ katihal
- ○ punchtec Connect XL
- ● Custom...

Step8:



Configuration Wizard

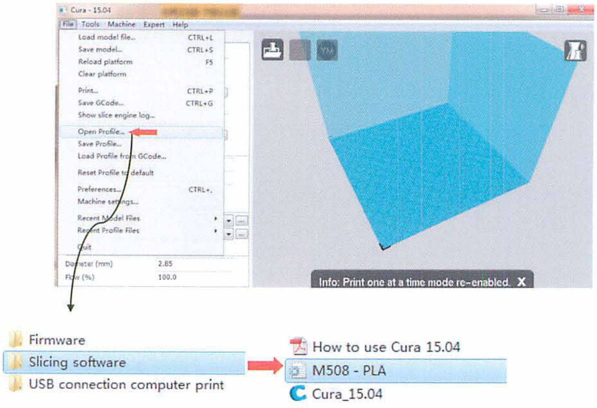
Custom RepRap information

RepRap machines can be vastly different, so here you can set your own settings.
Be sure to review the default profile before running it on your machine.
If you like a default profile for your machine added,
then make an issue on github.

You will have to manually install Marlin or Sprinter firmware.

Machine name	M508
Machine width X (mm)	214
Machine depth Y (mm)	214
Machine height Z (mm)	180
Nozzle size (mm)	0.3
Heated bed	☑
Bed center is 0,0,0 (RoStock)	☐

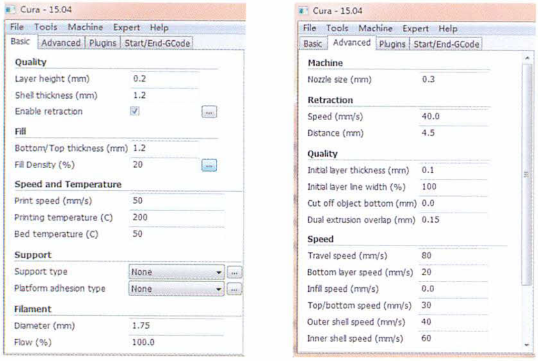
Step9:



Diameter (mm)	2.85
Flow (%)	100.0

Info: Print one at a time mode re-enabled. X

Step10:



Cura - 15.04

Quality

Layer height (mm)	0.2
Shell thickness (mm)	1.2
Enable retraction	☑

Fill

Bottom/Top thickness (mm)	1.2
Fill Density (%)	20

Speed and Temperature

Print speed (mm/s)	50
Printing temperature (C)	200
Bed temperature (C)	50

Support

Support type	None
Platform adhesion type	None

Filament

Diameter (mm)	1.75
Flow (%)	100.0

Cura - 15.04

Machine

Nozzle size (mm)	0.3

Retraction

Speed (mm/s)	40.0
Distance (mm)	4.5

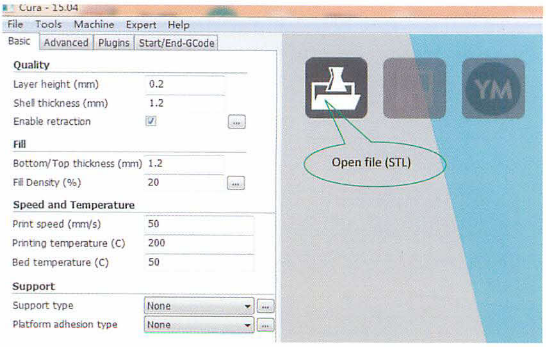
Quality

Initial layer thickness (mm)	0.1
Initial layer line width (%)	100
Cut off object bottom (mm)	0.0
Dual extrusion overlap (mm)	0.15

Speed

Travel speed (mm/s)	80
Bottom layer speed (mm/s)	20
Infill speed (mm/s)	0.0
Top/bottom speed (mm/s)	30
Outer shell speed (mm/s)	40
Inner shell speed (mm/s)	60

Step11:



Cura - 15.04

Quality

Layer height (mm)	0.2
Shell thickness (mm)	1.2
Enable retraction	☑

Fill

Bottom/Top thickness (mm)	1.2
Fill Density (%)	20

Speed and Temperature

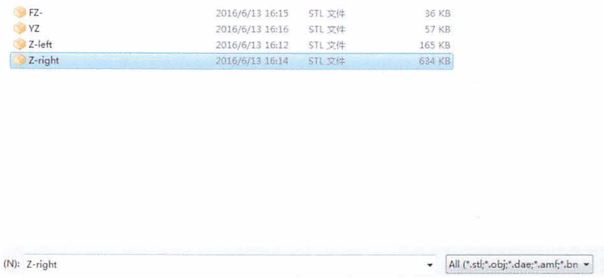
Print speed (mm/s)	50
Printing temperature (C)	200
Bed temperature (C)	50

Support

Support type	None
Platform adhesion type	None

Open file (STL)

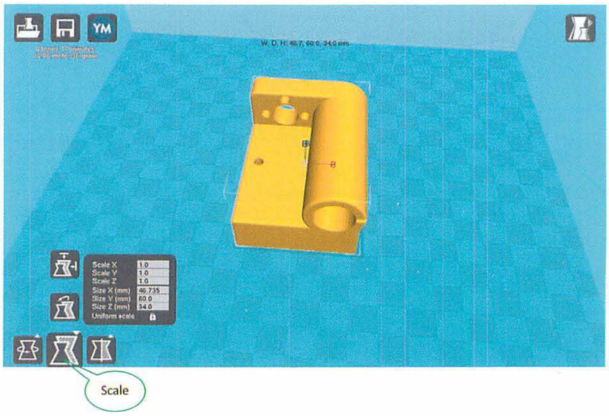
Step12:



FZ-	2016/6/13 16:15	STL 文件	36 KB
YZ	2016/6/13 16:16	STL 文件	57 KB
Z-left	2016/6/13 16:12	STL 文件	165 KB
Z-right	2016/6/13 16:14	STL 文件	634 KB

(N): Z-right

Step13:

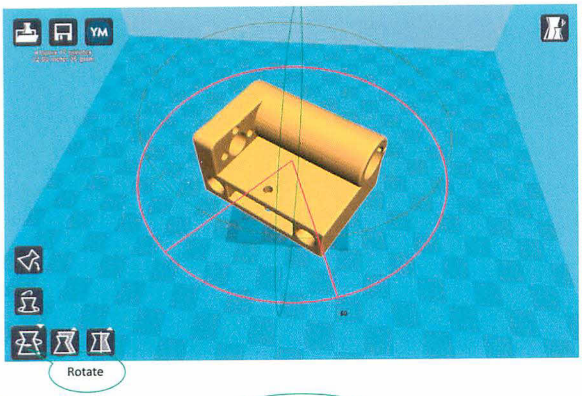


W, D, H: 46.7, 60.0, 34.0 mm

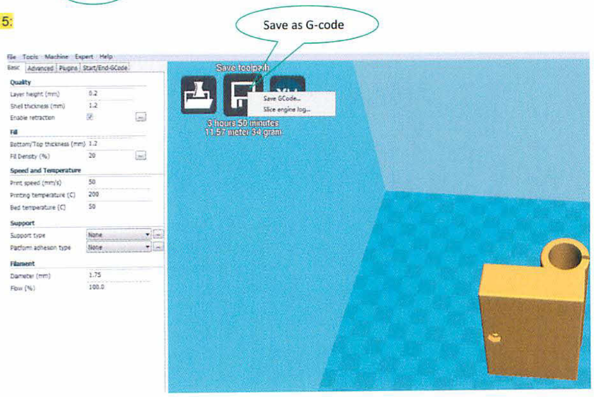
Scale X	1.0
Scale Y	1.0
Scale Z	1.0
Size X (mm)	46.735
Size Y (mm)	60.0
Size Z (mm)	34.0
Uniform scale	

Scale

Step14:



Step15:


Save as G-code
Save toolpath
Save GCode...
Slice engine log...
File Tools Machine Expert Help
Basic Advanced Plugins Start/End-GCode

3 hours 50 minutes
11.57 meter 34 gram

Quality
Layer height (mm) 0.2
Shell thickness (mm) 1.2
Enable retraction ☑

Fill
Bottom/Top thickness (mm) 1.2
Fill Density (%) 20

Speed and Temperature
Print speed (mm/s) 50
Printing temperature (C) 200
Bed temperature (C) 50

Support
Support type None
Platform adhesion type None

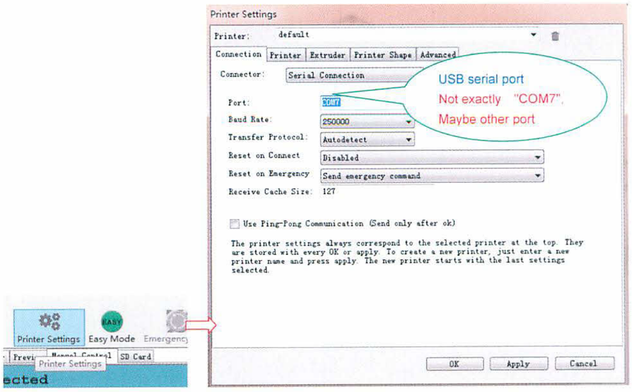
Filament
Diameter (mm) 1.75
Flow (%) 100.0

9.1.2 Online Printing

1. **Online Printing:** Connect the printer to your computer and then you can get start printing by computer control.
2. **Connecting to your computer with USB cable:** Please open the "SD-Card: \ Software \RepetierHost_1_0_6" and click the software"RepetierHost_1_0_6", then you can start printing with slicing the printing file by Repetier according to "How to use Repetier".

Note: How to set up 3D printer and computer connection

Step1: Choose the correct baud rate and COM port



Printer Settings

Printer: default

Connector: Serial Connection

Port: COM7

Baud Rate: 250000

Transfer Protocol: Autodetect

Reset on Connect: Disabled

Reset on Emergency: Send emergency command

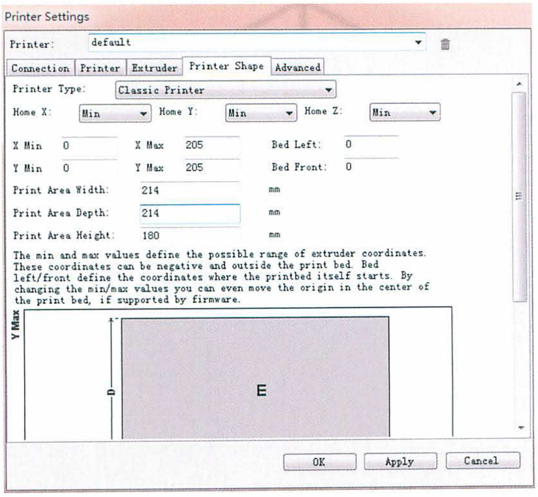
Receive Cache Size: 127

☐ Use Ping-Pong Communication (Send only after ok)

The printer settings always correspond to the selected printer at the top. They are stored with every OK or apply. To create a new printer, just enter a new printer name and press apply. The new printer starts with the last settings selected.

USB serial port
Not exactly "COM7",
Maybe other port

Step2: Set the print range



Printer Settings

Printer: default

Printer Type: Classic Printer

Home X: Min Home Y: Min Home Z: Min

X Min 0 X Max 205 Bed Left: 0

Y Min 0 Y Max 205 Bed Front: 0

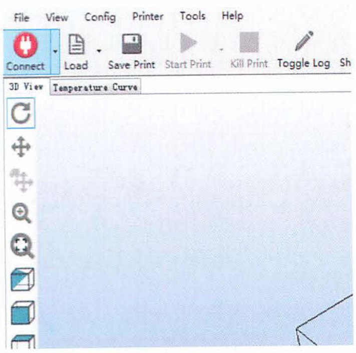
Print Area Width: 214 mm

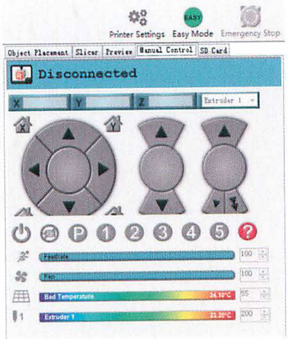
Print Area Depth: 214 mm

Print Area Height: 180 mm

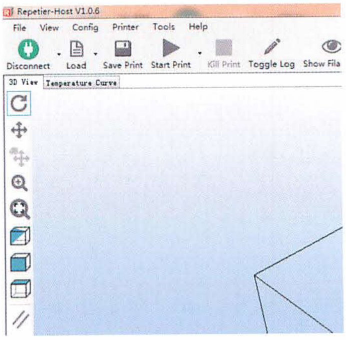
The min and max values define the possible range of extruder coordinates. These coordinates can be negative and outside the print bed. Bed left/front define the coordinates where the printbed itself starts. By changing the min/max values you can even move the origin in the center of the print bed, if supported by firmware.

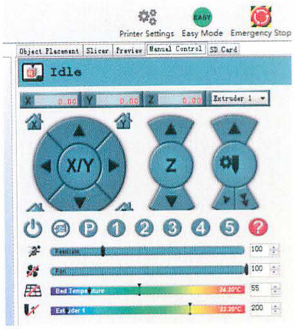
Step3: Start to connect





Step4: Connecting successfully

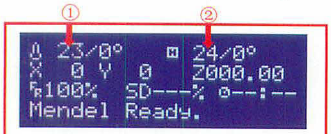




10. Frequently Asked Questions and Solutions

Please get the "Common problem" from the SD card for your reference (SD-Card: \Common problem)

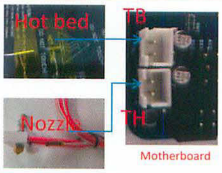
10.1 "Err: MINTEMP" Alarm processing method

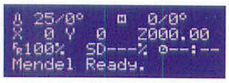


```
  23/0°      24/0°
X   0 Y   0   Z000.00
FR100%  SD---% ⊙--:--
Mendel Ready.
```

Normal temperature display interface

①: Nozzle real time temperature
②: Hot bed real time temperature

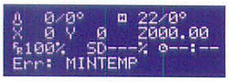




```
  25/0°      0/0°
X   0 Y   0   Z000.00
FR100%  SD---% ⊙--:--
Mendel Ready.
```

②(No temperature)display

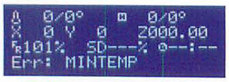
Reason: the hot bed thermistor is not connected to the main board "TB";



```
   0/0°      22/0°
X   0 Y   0   Z000.00
FR100%  SD---% ⊙--:--
Err: MINTEMP
```

①(No temperature) display

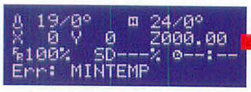
Reason: the nozzle thermistor is not connected to the main board"TH"



```
   0/0°      0/0°
X   0 Y   0   Z000.00
FR101%  SD---% ⊙--:--
Err: MINTEMP
```

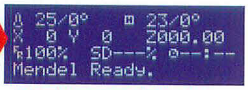
①②(No temperature display)

Reason: the hot bed and the nozzle thermistor are not connected to the main board "TB", "TH";



```
  19/0°      24/0°
X   0 Y   0   Z000.00
FR100%  SD---% ⊙--:--
Err: MINTEMP
```

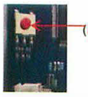
①②(Temperature display)



```
  25/0°      23/0°
X   0 Y   0   Z000.00
FR100%  SD---% ⊙--:--
Mendel Ready.
```

(Normal temperature display interface)

Press the reset button on the motherboard or after power-off restart, Appear "Ready Mendel", "Err: MINTEMP" Alarm release.



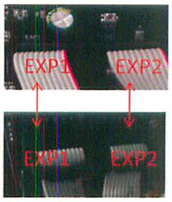
10.2 Trouble: LCD screen is not bright

Solution method:

(1). Confirm whether the power supply is normal ;

(2) Confirm the LCD screen on the EXP1, EXP2 port is connected with the EXP1, EXP2 port on the motherboard, and no loose or poor contact

(Main board power indicator light, power supply is normal)

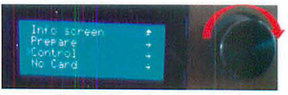


(LCD screen)

(Motherboard)

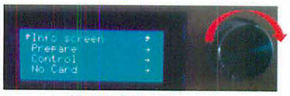
10.3 Trouble: Rotation button cannot be up and down the selection menu

(By rotating the button on the left side of the pointer can be up and down the selection menu)



(Normal figure)

(No response to the left pointer by the rotation button)

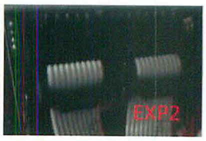


(Abnormal figure)

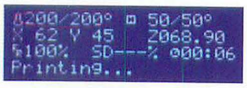
(Solution method) :
(Confirm that the EXP2 interface is properly connected, and that there is no contact with the bad phenomenon):

(LCD screen)

(Motherboard)



10.4 No extruded filament when printing



```
 200/200°   50/50°
X  62 Y  45   Z068.90
FR100%  SD---% ⊙00:06
Printing...
```

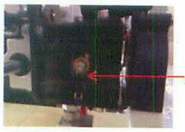
Picture 10.1 (Figure 1)

1.Check and confirm if the heating temperature is up as the setting (picture 10.1);

2.The heating temperature is OK,push down the filament and confirm the nozzle extrude the filament (Picture 10.2);

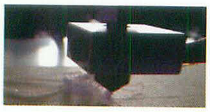
2.1 If the nozzle extrude the filamentby pushing down, please check and confirm if the filament feed wheel is loose or not (Picture 10.3)

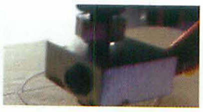
2.2If nozzle didn't extrude the filament, the nozzle must be blocked and clean it

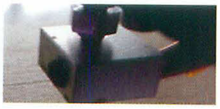


Picture 10.3 (Figure 3)

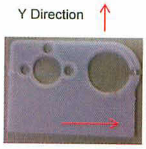
10.5 Problems on the distance between nozzle and hotbed



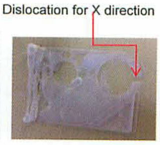




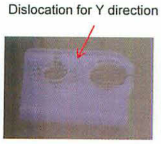
10.6 Model Dislocation when printing



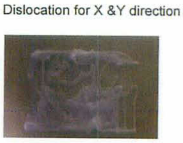
Picture 10.4



Picture 10.5

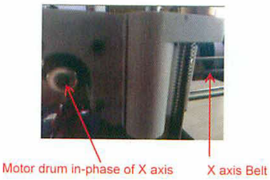


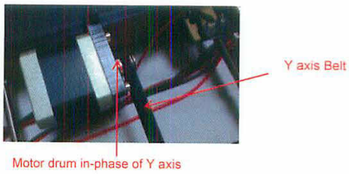
Picture 10.6



Picture 10.7

1. Settle way of Dislocation for X direction: Check if Motor drum in-phase of X axis is loose or if the X axis belt is too tight or loose;
2. Settle way of Dislocation for Y direction: Check if Motor drum in-phase Y axis is loose or if the Y axis belt is too tight or loose.
3. Settle way of Dislocation for X & Y direction: Check if Motor drum in-phase X & Y axis is loose or if the X &Y axis belt is too tight or loose.



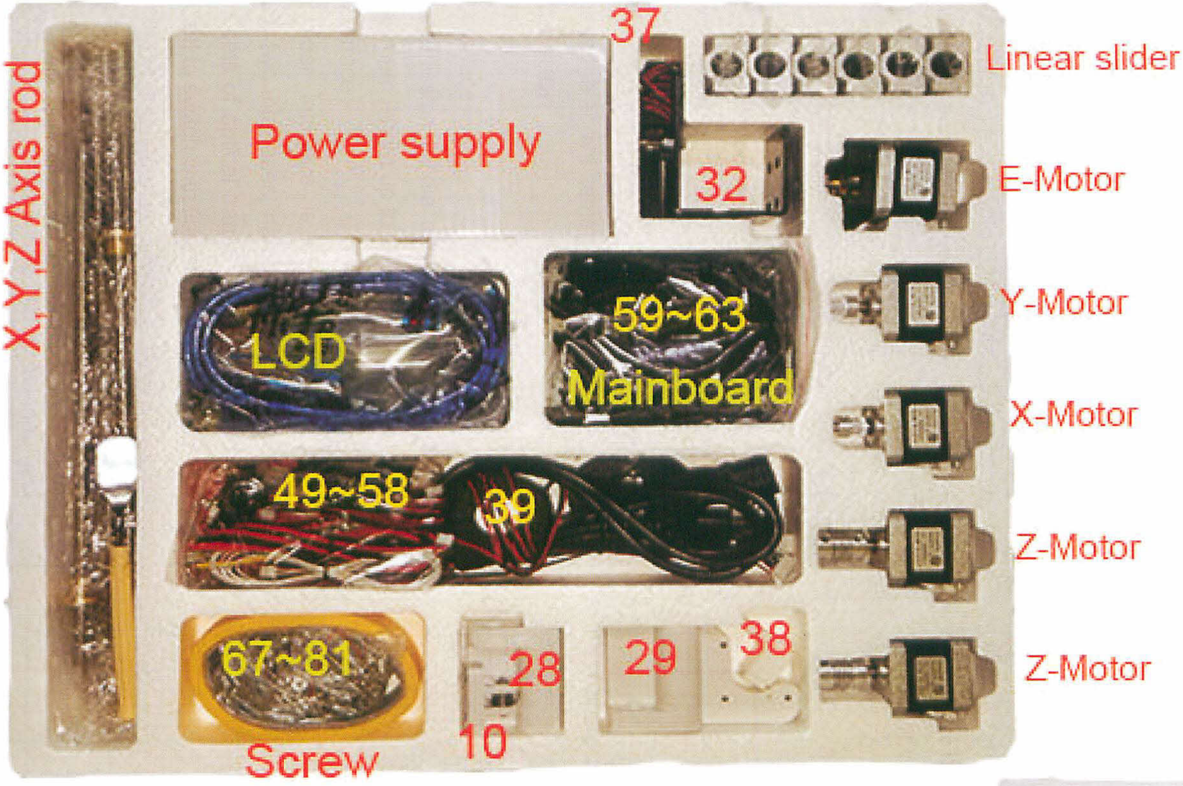


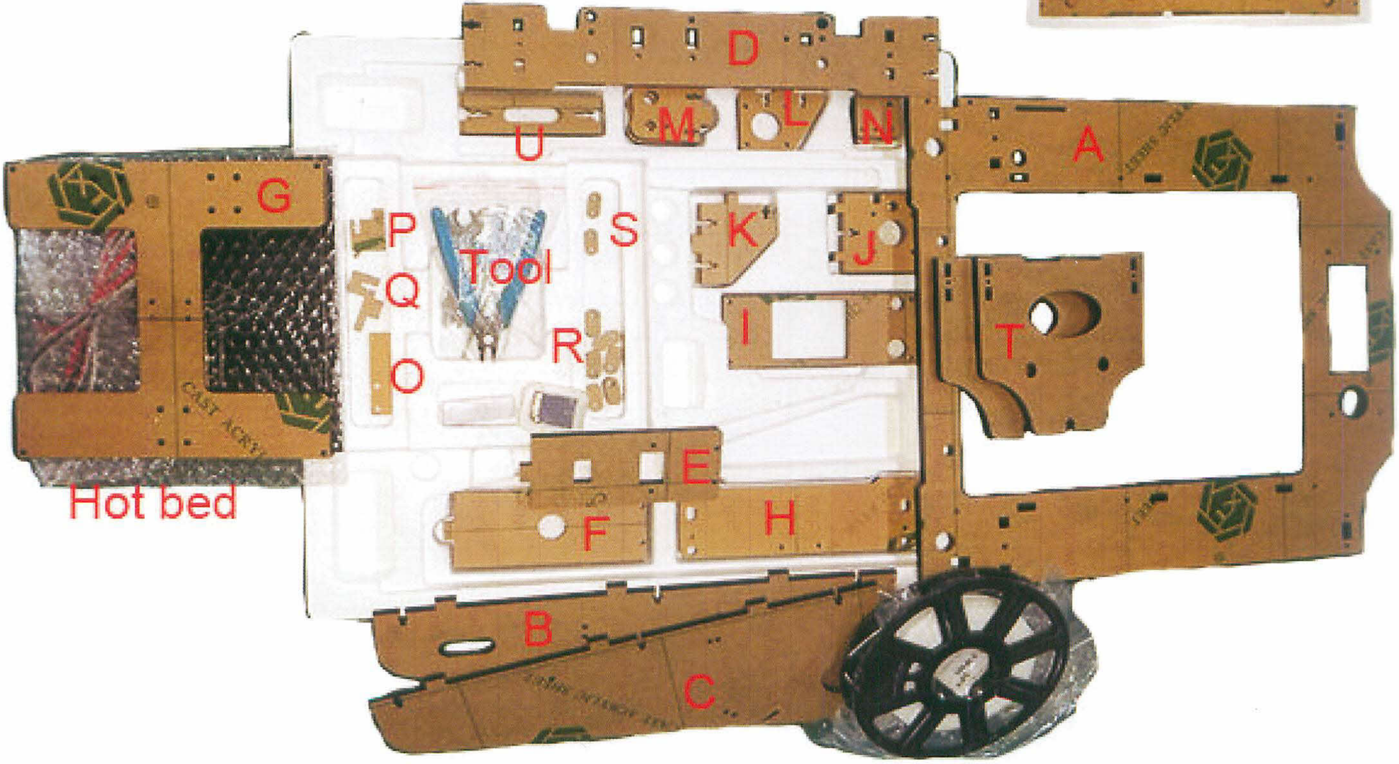
PS: Please visit our site if you would like to get more information on 3D printer: *http://www.alunar.net*.

ALUNAR

E-mail : service@alunar.net

Website : www.alunar.net

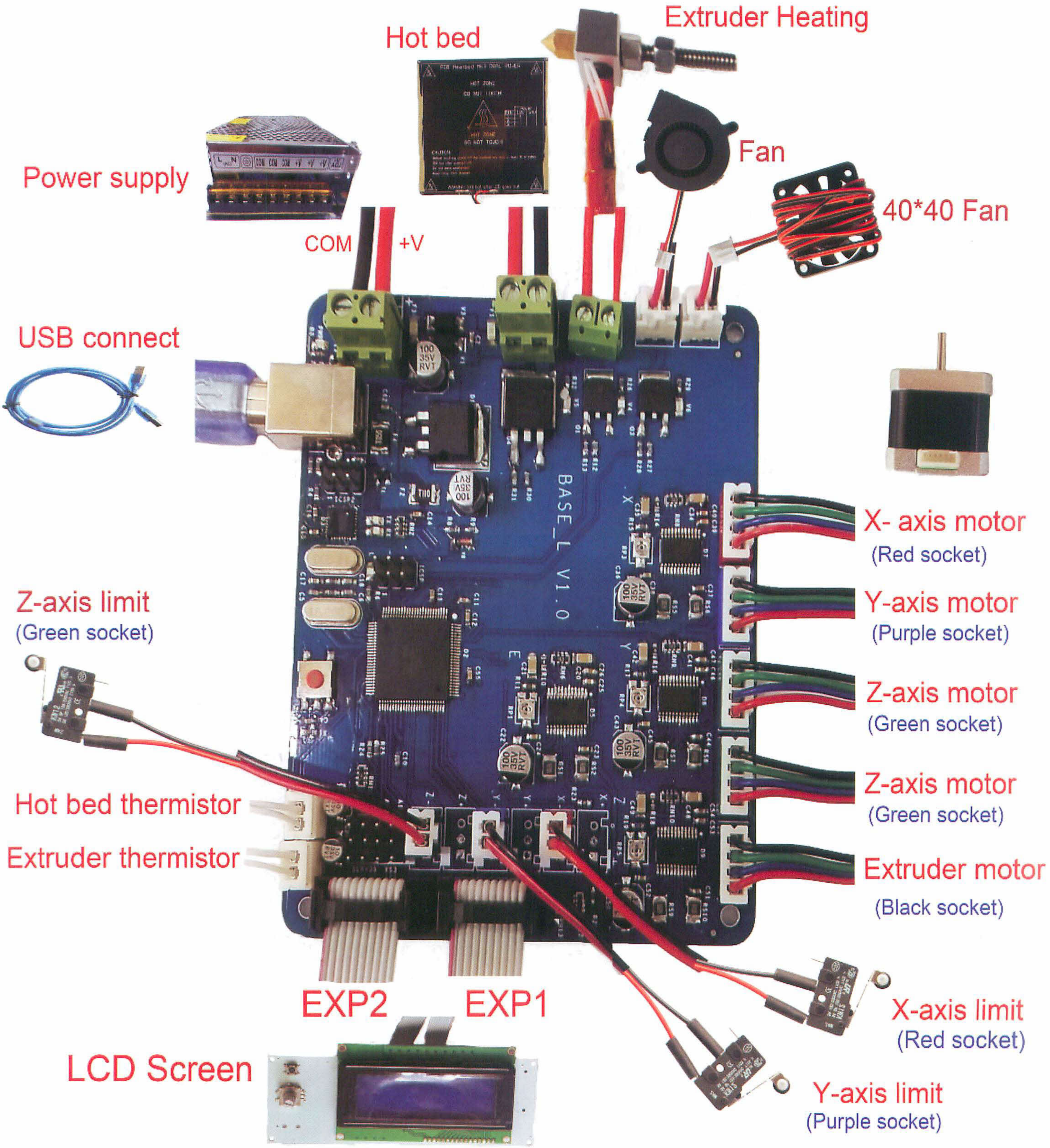

X,Y,Z Axis rod
Power supply
37
Linear slider
32
E-Motor
LCD
59~63
Mainboard
Y-Motor
X-Motor
49~58
39
Z-Motor
67~81
28
29
38
Z-Motor
10
Screw


D
U
M
L
N
A
G
P
S
K
J
Tool
Q
I
T
R
O
E
Hot bed
F
H
B
C

Packing List

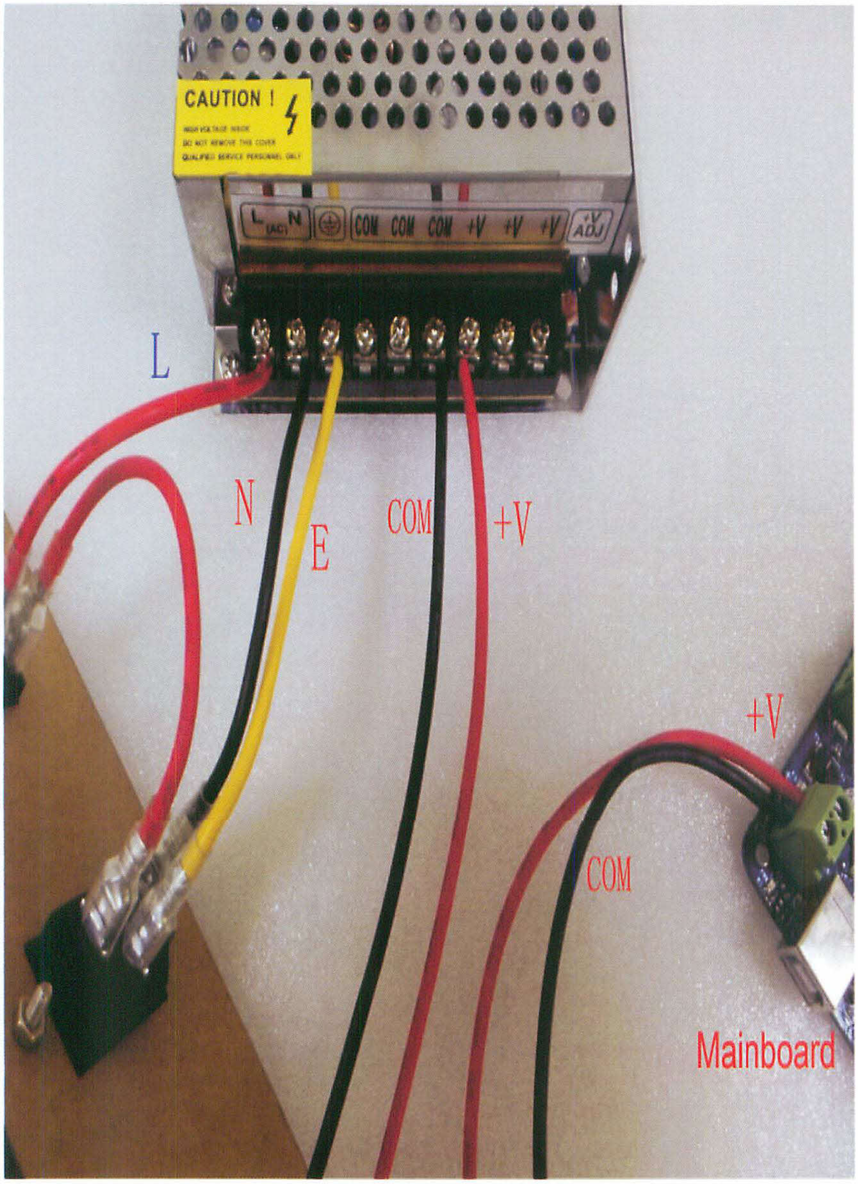
No.	Item name	qty	No.	Item name	qty
	Frame		48	Power supply	1
1	Frame A	1	49	AC Plug	1
2	Frame B	1	50	Power Switch	1
3	frame unit C	1	51	frame unit E	1
4	frame unit D	1	52	frame unit F	1
5	frame unit H	1	53	Power Supply wire1(red ,yellow,black)	3
6	M8 screw rod A length:400mm	2	54	Power Supply wire2 (red)	1
	Y Axis		55	Power Supply wire 3	1set
7	⊄8 Guide rod A length:380mm	2	56	Motor cables length:600mm	3
8	30MM linear motion ball slide units	3	57	Motor cables length:1000mm	2
9	Y axis motor assemble	1 set	58	power cable	1
10	Y bearing support assemble	1 set	59	Tie tube	2M
11	frame unit P	1	60	2GT belt 6mm	1.7M
12	End stop length 1000mm	1	61	Tie-wrap	10
13	frame unit Q	1	62	Distance washer	3
14	frame unit R	4	63	R clip	2
15	frame unit S	2		**Filament rack**	
16	frame unit L	1	64	M8 screw rod B length:160mm	1
17	frame unit G	1	65	frame unit T	2
18	Hot bed(with Thermistor)	1	66	frame unit U	2
	Z Axis			**Screw and Nut**	
19	frame unit J	2	67	Hexagon screw M3*8	6
20	frame unit K	2	68	Hexagon screw M3*12	15
21	frame unit R	2	69	Round head screw PM3*18	57
22	frame unit M	2	70	Hexagon screw M3*20	16
23	frame unit N	2	71	Screw M3*30	4
24	End stop length 400mm	1	72	Hexagon screw M3*30	4
25	Z axis motor assemble	2 set	73	Round head screw PM3*40	6
26	⊄8 Guide rod B(length:330mm)	2	74	screw TM4*8	9
27	T8 Threaded rod and nut	2 set	75	Hexagon screw M4*12	15
28	right plastic seat assemble	1 set	76	Hexagon screwM4*16	5
29	left plastic seat assemble	1set	77	Screw KA2*12	6
30	X axis motor assemble	1 set	78	Hexago nut M8	16
	X Axis		79	Hexago nut M3	67
31	⊄8 Guide rod A length:380mm	2	80	Wing nut M3	6
32	U bracket	1 set	81	Washer 8*18*1.5	16
33	30MM linear motion ball slide units	3		**Attached parts**	
34	frame unit O	1	82	Card Reader	1
35	End stop length 1000mm	1	83	Crepe Paper	1
	Extruder		84	USB2.0 data cable	1
36	Cooling	1	85	SD memory card	1
37	Cooling fan	1	86	Filament	1
38	Turbo fan	1		**Tool**	
39	Fan extender	1	87	Hexago screw driver 1.5#	1
40	Extruder motor assemble	1 set	88	Hexago screw driver 2#	1
41	Nozzle assemble (with thermistor and Cartridge)	1 set	89	Hexago screw driver 2.5#	1
42	Spare Thermistor	1	90	Hexago screw driver 3#	1
	LCD		91	phillips screw driver 3#	1
43	frame unit I	1	92	Straight screwdriver 3#	1
44	Distance washer	8	93	Straight screwdriver 2#	1
45	2004LCD unit	1	94	Wrench	3
46	Knob	1	95	Scissor	1
	Wiring		96	Trowel	1
47	Main control board	1			

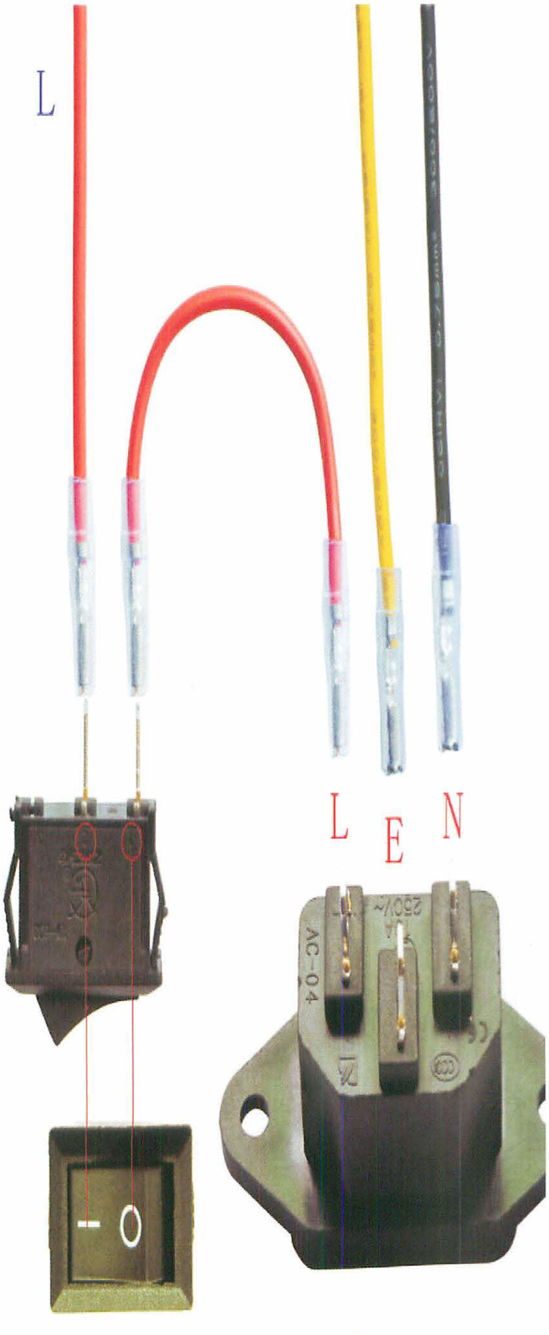
Wire diagram of mainboard

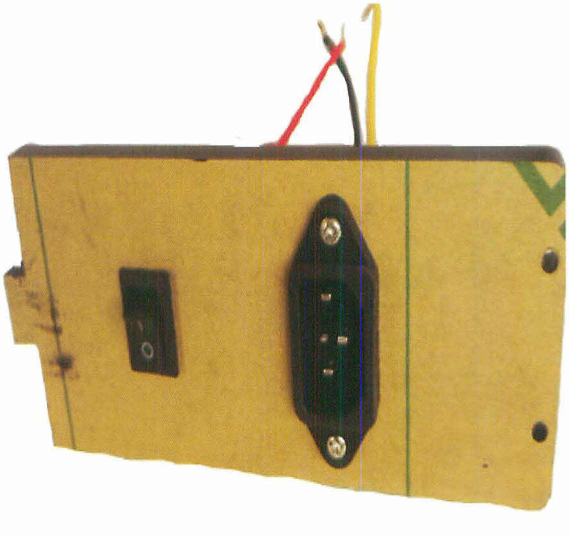


NOTE:

Do not insert or pull out the connection line between the motor and the main board when the power is turned on, so as not to damage the corresponding motor drive on the main board.







Wire diagram of power

ALUNAR

Website : www.alunar.net

日本語対応:Alunar 3D ストアの出品者メール

または Yukinajp@hotmail.com

ALUNARご購入いただき誠にありがとうございます。

弊社の商品やサービスについて、何か問題がありましたら、出品者メールまでお問い合わせください。楽しいショッピング体験をお与えするために、いつまでも努力しています。

弊社の商品についてご満足の場合、商品レビュー（写真/ビデオ/文字）またはフィードバックを共有頂ければ、他のお客様が恵みを受けられるチャンスがあります。レビュー/フィードバックを感謝するために、商品の保証期間を延ばすことをご保証いたします。

☺ レビュー ★★★★★
☺ フィードバック ★★★★★

再度ありがとうございます。またお越しくださいませ!

ALUNAR

E-mail : service@alunar.net

Website : www.alunar.net

Thank You So Much For Choosing ALUNAR

Dear Valued Customers,

Thanks for your purchase! The item has been sent with care. We hope you are satisfied with our products and service. We are always pursuing to give you a perfect shopping experience.

If you have any concern about our products or service, Please do not hesitate to contact us for solution. We will be happy to correct any issue to ensure a great shopping experience for you.

If you are happy with our products and service, and willing to share, a feedback and product review (video, image, or text) will be the great motivation for our working, also others might be benefit from your experience.

☺ Review ★★★★★

☺ Feedback ★★★★★

Looking forward to your purchase again.

3D PRINTER UPDATE NOTIFICATION

Dear customer:

Attention please. ALUANR M508 3D printers' function menu in the catalog 7.Testing and commissioning is updated, which is a little different from the instructions in the video. Please refer to the updated details from 7.1.1 Power on Test---7.4.9 Print from SD in the M508 3D PRINTER QUICK START GUIDE in the SD card.

We would show our sincere apology for all the inconvenience we have brought to you. If you have any questions about the printer, please feel free to contact us, we will be glad to help. Thank you.

Sincerely,
ALUNAR 3D Team